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16 MAY 1949
CIVIL AERONAUTICS ADMINISTRATION

American Aviation

25c *The Magazine of Air Transportation* May 15, 1949

Fighting Solves Nothing

THE ATMOSPHERE of mutual distrust which has characterized the relations recently between airlines and airports came in for a little fresh air at important airport conventions during the past few weeks.

A few speakers had the courage to bring the strained relations out in the open. It's about time somebody did, for both parties have everything to lose and nothing to gain by sharpshooting at each other from a distance. Airlines can't do without airports and the large terminal-type municipal airports can't do without the airlines.

The airlines believe the airports are ganging up on them for a grand squeeze. The airports believe the airlines aren't paying their fair share of costs. It's a case of rights and wrongs on both sides.

It was only a few years ago during the honeymoon of pioneering optimism that everything was sweetness and light. Cities and airports couldn't do enough to get airline service and to make the boys feel at home with every other round on the house. Naturally the airlines made the most favorable deals they could get and, again quite naturally, they want to hold on tightly to those favorable deals today. But airport costs have soared and cities are trying to find out how to put their airports on a paying basis.

Airports today represent a public investment of something between one and two billion dollars. This investment, in fact, far overshadows the private investment in airlines. Yet even this vast sum has not provided the nation with a network of airports and of terminals which could be considered in any manner adequate. The taxpayer is getting concerned —and with good reason. He has demonstrated his concern by rejecting more than one big airport bond issue since the war. He wants his airport to be on a paying basis.

Airlines aren't by any means the sole or even the major users of airports in terms of landings and take-offs, as statistics show, but the fact remains that the length and strength of runways, the size of terminal buildings and many other requirements, are largely determined by airline needs. Their requirements set the pace.

We have a feeling that in the midst of a [illegible] many pressing and critical postwar prob[illegible]

(Turn to Page 8)

New President of Airport Executives

Don W. Martin, manager of the New Castle County Airport, Wilmington, Del., has been elected president of the American Association of Airport Executives. He succeeds Douglas Langstaff, executive director of Moisant International Airport, New Orleans. A pilot since 1929, Martin was wartime manager of the Detroit City Airport and is noted for his development of airport revenue.

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LOS ANGELES

News in Brief

A ticket-buying arrangement whereby airline travelers throughout the United States will be able to avoid paying the 15% transportation tax by purchasing tickets by mail or wire in Juarez, Mexico, was announced May 9. G. Y. Macomber, sales and traffic manager for Lineas Aereas Mexicanas, S.A. (LAMSA) in Mexico, said that cashier's checks, postal money orders or a Western Union money order may be sent to the LAMSA office in Juarez and tickets will be sent by return mail.

Paul Richter has resigned as TACA Airways president and is reported to be joining the Coca Cola Company in an important west coast position. He is expected to continue as a TACA director. Richter became president on Sept. 15, 1947, shortly after quitting TWA.

The Colorado Aeronautics Commission will continue to function despite being cut off with a $2 appropriation by the state legislature. The five commissioners have decided to serve without pay, but job of director, held by W. J. Bain, is being abolished June 30. The legislature was critical of amount of money the Commission spent during past two years, but the $2 appropriation maintains the group's official status.

Expansion of star route air mail service is authorized in a new committee-approved bill, H.R. 4498, introduced May 5 by Rep. Tom Murray (D., Tenn.), chairman of the House Post Office and Civil Service Committee. Important change from bill it replaces (H.R. 3842) is provision that bids shall be considered only from bidders who live within the state to be served or in an adjoining state within which one or more points to be served are located.

Student pilot certificates issued per month have fallen from 10,000 in February, 1948, to 2,700 in February this year, according to CAA Administrator D. W. Rentzel. Private pilot certificate issuances went down from 6,200 to 1,700. Rentzel stressed that the drop-off was inevitable with loss of veteran students and that tightening of VA regulations simply speeded up process.

Ryan Aeronautical's four-place Navion has gone up $1,020 because of increased cost of producing the improved 1949 model. Labor hours and equipment ran higher than originally estimated. New price effective on deliveries since May 1 is $11,005 f.a.f. San Diego.

Kaman Aircraft Corp. has announced that its K-190 utility helicopter has been certified by CAA, and that first delivery will be made about June 1.

BACKGROUND & TRENDS

'Influence' on CAB Members?

Sen. Ed Johnson (D., Colo.), chairman of the Senate Interstate and Foreign Commerce committee, who is currently investigating airline financial difficulties, gave a hint (and caused a lot of talk) of something he thinks may come out during the investigation. Johnson said he had a "suspicion" that certain of the "very large airlines" have a "great" influence with some of the members of the Civil Aeronautics Board, and that maybe his committee would have something more definite "to base conclusions on before six months are up." His unexpected statement was made in a radio interview.

Johnson recently told U. S. Chamber of Commerce luncheon delegates that, according to the Budget Bureau, "the out-of-pocket contribution American taxpayers are currently making annually to civil aviation is $300,-

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American Aviation

The Magazine of Air Transportation

Vol. 12 No. 24 ABC **May 15, 1949**

1025 Vermont Ave., N.W. Washington 5, D. C.
Telephone—STerling 5400 Cable—AMERAV

Includes **AIRPORTS** *and* **AIR CARRIERS**

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American Aviation is published 1st and 15th of each month by American Aviation Publications, Inc., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for United States, Mexico, Central and South American countries—$3.00 for 1 year; $5.00 for 2 years. Canada—$3.50 for 1 year; $6.00 for 2 years. All other countries—$4.50 for 1 year; $8.00 for 2 years. Entered as Second Class matter in Washington, D. C., and Harrisburg, Pa.

Publishing Corporation: American Aviation Publications, Inc., Wayne W. Parrish, president; Albert H. Stackpole, Eric Bramley, David Shawe, vice presidents; E. J. Stackpole, Jr., secretary-treasurer; John H. Poole, assistant secretary-treasurer.

West Coast Office: Park Central Building, 412 West Sixth St. Los Angeles 14, Calif. Trinity 7997. Fred S. Hunter, manager

American Aviation incorporates Airports and Air Carriers, Airports, Aviation Equipment, The American Pilot, Aviation Sales and Service, U. S. Aviation and American Airports. All rights to these names are reserved.

Other Publications

American Aviation Daily (including International Aviation): Published daily except Saturdays, Sundays, and holidays. Subscriptions: $16 one month; $180 one year. Clifford Guest, managing editor.

American Aviation Directory: Published twice a year, spring and fall. Single copy $5.00. Dallas R. Long, managing editor.

Official Airline Guide (formerly American Aviation Air Traffic Guide): Monthly publication of airline schedules, rates and regulations. Subscriptions: U. S. A and countries belonging to the Pan American Postal Union, including Spain and the Philippines, $9.00 one year; Canada $9.50. All other countries $11.00. Published from editorial offices at 139 North Clark St., Chicago 2, Ill State 2-2154. C. N. Johnson, production editor.

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BACKGROUND & TRENDS

(*Continued from Page 4*)

000,000. All of this is not for the airlines . . . but a major portion goes to airline operation. That seems a sizable sum for an industry whose total capitalization is but $700,000,000."

Mail Pay-Subsidy Separation

Some of the larger airlines are expected to support legislation to separate mail pay from so-called subsidy payments. These include **American Airlines, Eastern** and **United.** Croil Hunter, president of Northwest Airlines, has already stated that he favors a separation, but warns that its success depends on whether a fair service pay can be determined. Air Transport Association, however, will support CAB's view that legislation is premature and shouldn't be enacted until studies, now under consideration, have been completed.

West Coast Airline Fight

A three-way pitched battle is in full swing on the west coast between **Western Air Lines, United Air Lines,** and a **$9.99 intra-state carrier** operating between Los Angeles and San Francisco. It all started when Western began advertising "lowest fares" and "fastest flights". United complained to the L. A. Better Business Bureau, which then sent a letter to newspapers advising them not to accept WAL copy because of alleged "extravagant claims". (Newspapers continued to carry the ads, however). Then in comes the $9.99 carrier to add another complaint about "lowest fares". Both UAL and the intra-state operator filed complaints at San Francisco and UAL at Portland and Seattle.

Aviation Honeymoon Over?

Sharp warning that public attitude towards airports has changed and that public no longer will subsidize airports and aviation as it has in the past was sounded by Mayor Quig Newton of Denver at recent annual meeting of Airport Operators Council. Newton cited failure of airport bond issues as examples of public feeling that airlines, airports, and other aviation activities must pay own way. He pointed out that in many cities, including Denver, the largest single municipal investment is in the local airport. Called for were more intelligent planning, better budget and personnel practices, and more self-supporting activities.

Pressure for More Airport Funds

Movement is underway to persuade Senate Appropriations Committee to raise House allocated Federal funds for airport construction from $36,000,000 to at least $77,-000,000, which amount Airport Operators Council claims is available in state and municipal sponsor funds, for matching purposes. CAA Administrator D. W. Rentzel has indicated that the Federal program is being held up for lack of funds, but has not made explicit appeal to the committee for an increase.

CAA Personnel Reduced

CAA Administrator Del Rentzel has reduced CAA employes from 1947 peak of 18,400 to a current 16,600, largely through job attrition. There have been few dismissals, but when people leave, their jobs haven't been refilled. Watch for a further decline this year... Position of **Assistant Secretary of Commerce for Air** won't be filled for a while. Some Capitol Hill people have been suggesting that the job be combined with that of CAA Administrator, but this isn't being pushed by Rentzel. One man who won't get the job is **Dean Brimhall,** now assistant to the Administrator for research, who has been pushed hard by ex-CAA Chairman Robert Hinckley... **Rentzel** appeared before Senate Appropriations committee this month to ask for restoration of budget cuts made by the House. Involved is $9 million for development of Federal airways system under the RTCA project... **Phillips Moore,** who took over early this year as director of CAA's Office of Airports, is impressing observers as an official who has no use for red tape and whose only desire is to get some airports built. He's cut down on personnel and streamlined the office.

Among the Airlines

National Airlines is reported to have sold about 66,000 shares of authorized but unissued treasury stock to the Phipps estate, which owns a prominent Miami residential section and which is tied in closely to W. R. Grace & Co., owners of 174,000 NAL shares. Sale is said to give NAL president G. T. Baker and W. R. Grace & Co. undisputed control of the airline. This was the last block of NAL's authorized but unissued stock ...Chances are very much against **Capital Airlines** making any move to buy new twin-engined airplanes. Best bet is that company will stand pat for a while...There won't be any immediate move by **TWA** to replace its DC-3's

The big rush across the Canadian border to buy **tax-free tickets** on U. S. airlines (Canada has no transportation tax) increases chances of Congressional action to repeal or lower U. S. tax. Although a tax repeal rider was knocked out of a bill on oleomargarine taxes, several separate bills are pending. Croil Hunter, president of Northwest Airlines, says Canadian repeal is having an adverse effect on NWA business at competitive points He predicted that U. S. airlines will have to open Canadian offices to sell tickets on an equal tax-free footing.

People

Charles E. Hunter, president of Hunter Manufacturing Co., Bristol, Pa., is the new president of Conquistadores del Cielo, well-known aviation social group. **Paul Richter,** former president of TACA, is board chairman; **Charles H. Babb,** of Babb Co. Inc., senior v. p.; **John B. Walker,** of John B. Walker & Associates, junior v. p., and **Charles E. Rochester,** president of New York's Hotel Lexington, secretary-treasurer. New directors are **John Collings,** TWA; **Don W. Marshall,** Dallas, Tex.; **Will D. Parker,** Phillips Petroleum Co.; **Carl B. Squier,** Lockheed, and **Walker.** Annual fall fiesta will be at Seybold Ranch, Mineral Springs, Tex., about Nov. 15 to 20.

Oswald Ryan, CAB vice chairman, was sworn into new term of office May 5. It's third term for Ryan (ending Dec. 31, 1954) who is only remaining member of original Board which took office in 1938.

Alvin Adams, the aviation consultant, is undertaking a complete survey of Northwest Airlines and is tackling the Orient segment first.

Roscoe Turner is actively engaged in trying to get his feederline started. **S. J. Solomon,** consultant and Washington representative, is attempting to find equipment and capital for Turner.

Maj. Gen. Follett Bradley, USA (ret.), was elected president of the Wings Club in New York, succeeding **Gill Robb Wilson. Arthur Christie** of Pratt & Whitney, **Roger Wolfe Kahn** of Grumman Aircraft, **Casey Jones** of the Academy of Aeronautics, and **Cord Meyer** of the Cord Meyer Co., were elected vice presidents.

Supplied by air transport alone, 2½ million Berliners sample a new way of life

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Needed—and desperately—are larger, faster types of aircraft designed exclusively for air transport. And to meet this need, Douglas is now building the giant Douglas DC-6A. Able to fly 30,000 lb. loads at 300 mph, the DC-6A will make available to the military services a cargo transport of *rugged dependability*, capable of supplying world-wide bases in any kind of national emergency.

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EDITORIAL

(CONTINUED FROM PAGE 1)

airlines have sorely neglected or overlooked the airport problem. Considering the fact that an airline isn't an airline without resting places at the points it serves, it would seem that this single problem is of at least equal importance with operations, maintenance, traffic and sales. Yet in the past six years the airport problem has received secondary attention top-side.

The official-in-charge of airports for any given airline is not in the upper policy brackets of his company unless his function is largely political, yet the major airport problem goes far beyond the political into the realm of engineering, planning, revenues, maintenance, and the like. The one big reason why terminals are so poorly designed and so inadequate for their primary purposes is because the airlines have usually maintained a detached position with regard to so many of the problems.

On the other hand it has seemed quite natural for municipalities to provide the airport facilities and to regard the airlines as tenants. In theory this was to work out satisfactorily for all concerned, but in practice the airport costs have risen beyond all early expectations and many municipalities or other public bodies are unstable and subject to frequent change. Very often the airlines have had to pay for many services and frills which they did not want and over which they had no control.

There is a limit to what the airlines can pay for their share of the maintenance of airports and the present feeling of distrust among the airlines toward major airports is quite understandable in view of such developments as the poorly-handled efforts of the Port of New York Authority to reform and change things overnight. Yet somehow or other the airlines and the airports must get together to work toward a common goal of self-sufficiency.

Airlines were notably absent at the annual meeting of the American Association of Airport Executives at Oklahoma City. Many of the airport managers felt the airlines were snubbing them, but whether or not there were any intentional absences the fact remains that their staying away was not good industry public relations. Some airport managers, notably some newcomers in the field, are trigger-happy in their attitude toward the airlines and suspect the worst at the drop of a hat. As long as such suspicions prevail there cannot be a solution to the common problems of carriers and airports.

At the Airport Operators Council meeting in Denver there was a refreshing effort to face today's problems although here again there was a feeling that the airlines were intentionally snubbing the airport operators—at least until George Gardner, president of Northeast Airlines, appeared on the final day and sounded off in a constructive and frank manner about the clouded relationship of carriers and airports. "We're all in this business together and we might as well work together and solve our problems," he said. "Hating each other won't do it."

The airlines might as well face the fact that the airport managements are not only organized for their mutual good but are moving forward to standardize airport practices and accounting. Airports are big business. On the other hand, airport managements today—with some notable exceptions—need historical perspective and appreciation of the vast overall problems which confront the nation's air transport system. The biggest single aid to solving costs is more and more passengers passing through the airports—more flights, more visitors, more business on the field. The way to reach that goal is give and take, a realization and understanding of each other's problems. A healthier atmosphere of trust will perform miracles.

Light Aircraft and the Army

THE military ground forces are increasingly aware that they need light aircraft to round out their mobile equipment and weapons. To this end the Department of the Army has given assurance to the light aircraft manufacturing industry that it is anxious to aid the industry in improving airframes, power plants and accessories.

Three Army officers appeared at the sixth annual Personal Aircraft Meeting of the Institute of the Aeronautical Sciences at Wichita late in April and outlined the Army program and told the light aircraft people what they needed in the way of airplanes. At a time when personal aircraft production seems to be sliding lower each year, the profferred help from the Army is most encouraging.

The ground forces want a two-place high-wing tandem reconnaissance plane to supplement the ground jeep. They want a four-place high-wing rigidly-built and easy-to-fly craft to supplement the weapons carrier on the ground. They want a cross-country aircraft to supplement the staff car. And they want helicopters for all sorts of purposes.

According to agreements reached recently, the Air Force is charged with the responsibility for research, development and procurement of aircraft required by the Army and the latter will reimburse the Air Force out of its own funds. We suspect this arrangement will not work, however, unless the Army has a full part in the development program. What the Army wants are vehicles that fly and the Air Force, with its own specialized outlook and needs, does not always understand such a fundamental requirement.

The light aircraft industry has complained for a long time that it doesn't have sufficient funds to experiment and develop new equipment. The Army can fill an important niche as a proving and testing ground—and all of civil aviation can benefit. The Army says it wants dependability, short-field performance, visibility and sufficient gross weight to carry useful loads. This is the same set of requirements demanded by most users of personal aircraft. It seems to us that it will pay the light aircraft industry handsomely to be "adopted" by the ground forces.

WAYNE W. PARRISH

"As a means of basing our airport decisions on common sense, conjure up a mental picture of a voluble Latino, who's got to go, standing in front of a 10c pay toilet without a dime, unable to read what the sign says and looking at a Negro washroom boy who doesn't speak Spanish in an international terminal. It all adds up to poor public relations."—**George Gardner,** president of Northeast Airlines, before the Airport Operators Council.

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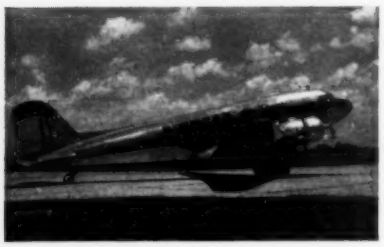

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Established
June 1, 1937

American Aviation

Volume 12
Number 24

Everybody Loses, Nobody Gains:

Airports and Airlines Must End Mutual 'Hate' Campaigns

The strained relations between airports and airlines came to a head at the Airport Operators Council, representing 25 of the nation's largest airports, at its second annual convention in Denver May 2-4.

An oil company executive and an airline president both spoke out frankly to the airport executives that nobody is gaining in the present era of mutual distrust between users and management and that all parties must admit their mistakes and "start over."

Faced with rising costs, greater demands, necessary expansion and a growing attitude on the part of taxpayers that aviation must stand on its own, the airports generally have been demanding higher fees from users of their airports. The airlines, on the other hand, have taken the attitude that they are being squeezed unnecessarily.

Stop 'Hate' Campaigns. Robb C. Oertel, of Standard Oil of New Jersey, representing the American Petroleum Industries Committee of the American Petroleum Institute, and George Gardner, president of Northeast Airlines, both faced the issues squarely and said the only solution to current problems is to stop the various "hate" campaigns on both sides and work together for the mutual good.

"You gentlemen of the Airport Operators Council are custodians of a tremendous public investment, one with a value undoubtedly in excess of one billion dollars, possibly approaching two billion," Mr. Oertel said. "On the average these properties operate at an annual loss of considerable size. It is your duty to reduce this loss to the extent you are able to do so through good business practices.

Oertel

"In the earlier days of the air transport industry the airlines themselves seem to have made large contributions to their present difficulties with you and to the extent they did so must share the blame for their present situation. On the other hand those earlier agreements must have seemed 'fair and reasonable' then or the airport agencies involved would not have subscribed to them.

"What I am driving at is that we now confront 1950 and I sincerely believe the airlines' attitude of 1930 has changed to a more realistic position. I think they are ready and willing to pay their fair portion of airport operating expenses. Of course there will be differences of opinion between you as to just what these 'fair' charges are, but if both sides approach the problem openly and as men of good will the solution will be found.

Mutual Distrust. "Since writing these words I have begun to doubt them myself. I am not at all sure the airlines are willing, at this time, to scrap the old airport user contracts which unduly favor their interests. What I'm really sure of is that they would be willing to do so except for one regrettable fact. They don't trust you. It's pathetic, but you don't seem to trust them either.

"I don't know where right left off and wrong took over on either side, but in such an unfavorable atmosphere no real solution to your joint problems will be found.

"The thing I deplore is the present tendency to try to use the oil companies as cats' paws in getting your chestnuts out of the fire. Time and again effort is made to increase airport revenue by imposing charges on oil companies for delivering products purchased from them by your airline tenants. The methods used vary from a bald attempt at collecting 2c a gallon through a policeman at the gate, to a more subtle approach such as excessive fees for the use of barge dock, tankage and roadways.

"Ours is a most competitive industry, one which seems particularly hungry for airline accounts. Prices to them are at least as low as those accorded any other class of buyer. Any delivery expense caused by airport charges must result in increased price to airlines. This is the same as increasing the charges paid by airlines directly. Any economies which might appear to result from delivery systems which airports install should be passed on to airlines who use those facilities, who could have created them for their own use, if permitted to do so.

"Unjustified charges of this nature are sure to be recognized as attempts to raise airline 'user fees' and undoubtedly will cause unfavorable reaction. Your interests and our interests in aviation have much in common. We think you are grand folks, I think some of us are pretty nice too. It's our sincere desire to team with you and the airlines in our proper function of providing efficient low cost service of superior products."

Equal Frankness. Gardner talked in a like vein of frankness.

"The airport-airline landlord-tenant relationship is essentially a real estate deal," he said, "and I am sorry to say that today the climate in which we deal is extremely bad. Why?

"We have moved from the sun-drenched palm studded beach where everything was sweetness and light, where the airline operator thought if he could only get his passengers on and off the airplane with the greatest convenience and dispatch, he would be able to make all kinds of money, and with no trouble support his dear friend the airport operator.

Gardner

"Then representing his community, the airport operator or prospective one had his heart swelling with love and a desire to please. It was his job to lure the airline into bringing much coveted service to his home town, but he didn't have to mention such common-place things. Bills weren't to be considered, his community must have the best and get the most and was willing to help foot the bills.

"In this dazzling setting, we made happy mutual plans for great service to the traveling public."

Costs Mount. Gardner then reviewed what happened. Frequency didn't happen, passengers began to be particular, airport costs mounted and pretty plans began to cost far more than the estimates. Then the airports suddenly found that passengers and visitors would buy hamburgers and popcorn, so the trend was toward more and more charges and concessions.

"Charge 'em to get in, charge 'em to get out, charge 'em to look, charge 'em to eat, drink and go to the bathroom," Gardner declared.

"The snow thickened as the cost mounted. For some time now we have been on a blizzard-swept wasteland of mutual recrimination, self-pity and self-assurance. Before spring can come we have all got to turn off the wind, turn on the sun, and create an atmosphere

in which a mutually beneficial deal can be made.

"Certainly you can't imagine a landlord who would tolerate a tenant that let the water run, left the lights on, and the windows open, just because the utilities were included in the rent: nor can we imagine a tenant who wants to run a dime store being happy if the landlord started charging a quarter to get in the building or to park within a mile of it.

"The greatest contribution the airlines can make to support an airport is to expand their business and carry more and more passengers and cargo, and be able to fly more and more trips. But over this basic effort the law of diminishing returns hangs like the sword of Damocles—only in this case both of them are under the sword.

"Various sources of revenue will work in various places and I'm sure if we can sit down and in a spirit of mutual respect, analyze which fit where, the sun will shine again. We can leave a little skin on a whole lot of passengers instead of haggling over the whole skin of a few and finding we still haven't got enough so that either of us can stay in business."

Milking Resented. Speaking of additional revenues, Gardner said the public's patronage must be drawn by a service type concession that will be appreciated, not resented, and one that is not obvious. "Our patrons only increase if they want to. There isn't a day goes by that someone when we are discussing the short flight from New York to Boston, doesn't start adding up time, taxi and bus cost, to make a comparison with the railroad. Matter of fact, at present levels, they run nick and nick. They won't stand much more milking."

Gardner discussed numerous ways to increase revenues and also answered various arguments as to why certain things such as reserved seats on the airplane couldn't be accomplished.

"In closing," he said, "let me make one plea. There is an M.C. in a rather risque gin mill in Boston, who after his first dirty story kind of shocks his audience into silence, looks at them and says: 'Come on, what the hell, you're in here, you're disgraced anyway—you might as well laugh.' We are all in business together, we might just as well work together and solve our problems. Hating each other won't do it, no matter how just we think our side of the story."

AOC's New Officers

Bernard M. (Mike) Doolin, of San Francisco, is the newly-elected president of the Airport Operators Council.

Other officers elected at AOC's Denver convention are: A. B. Curry, Miami, first vice president; Charles J. Lowen, Denver, second vice president; John Berry, Cleveland, and Hervey Law, New York, directors. J. Victor Dallin, of Philadelphia, the retiring president, also becomes a director.

Cyril C. Thompson, executive secretary, and Leander I. Shelley, general counsel, continue in those capacities.

RFC Bond Support Needed For New Airport Facilities

One pressing problem which municipalities must solve if they are to stimulate the growth of lightplane flying and increase the use of their airports is that of financing the erection of adequate hangar facilities and terminal buildings, and to Clyde E. Cole, manager of Bishop Airport, Flint, Mich., there is only one logical answer—the issuance of revenue bonds.

Addressing the American Association of Airport Executives meeting in Oklahoma City, Cole urged the petitioning of Congress to pass a bill authorizing the Reconstruction Finance Corporation to loan money to public-owned airports for the erection of revenue-producing buildings, with revenue bonds as security.

This, he said, offered the best hope of remedying the current inadequacies of airport facilities, inadequacies which tend to discourage rather than encourage the ownership of an airplane for use in either personal or business transportation.

"If we as airport executives are going to do our part in promoting the use of the small airplane for private operations, we must provide facilities and conveniences to put the airplane owner somewhere near the level of the automobile owner so far as its use is concerned," Cole declared.

How Flint Did It. Admitting that many municipalities are reluctant to spend money on airport buildings when they have so many other more pressing demands within the city limits, Cole told how Flint met its need for more aircraft storage space.

Working under the assumption that such buildings should be self-liquidating, the City of Flint financed 100% of cost of the purchase and erection of 20 T-type hangars by the issuance of revenue bonds, which were purchased by a local bank and secured by the revenues from the buildings. Subsequently, 20 others were similarly financed, and all are well on the way toward paying for their purchase and erection. Many municipalities could do the same thing, Cole said.

Clyde E. Cole

However, because of the reluctance of banks in some communities to invest money in such bonds because of previous unprofitable experiences in lending money for aviation enterprises, the best answer would be RFC loans, the speaker asserted.

He suggested the same type of financing for terminal buildings, which he said present even a bigger problem to airport authorities than storage hangars due to the fact that much more money is needed for their construction, and possible revenues are not as apparent as in the case of hangars.

He pointed out that airport authorities in erecting an administration building would then have the choice of paying 50% toward the cost of the building and accepting a 50% Federal-aid grant under the National Airport Plan, or of applying to the RFC (providing the bill should pass Congress) for a 100% loan on a revenue bond basis.

Should Pay Rent. It was Cole's thought that the Federal government should pay "fair and reasonable" charges for space in terminal buildings, instead of the nominal $1.00 per year with a small allowance to cover heating and lights which they now pay in most communities.

"In cases where the entire burden of building costs is borne locally, these agencies should expect to pay current rental rates with no special consideration," the Flint airport executive said.

"On the other hand, should Federal agencies participate in the building costs and assist in RFC financing, then $1.00 per year leases would be in order in a reasonable area necessary for their functions, with additional allowances for maintenance, heat, power and other services.

The other part of the administration building not used by government agencies should be revenue producing, he said, and over a period of years should return the money advanced with interest and should involve no extraordinary risk.

"Such a plan," Cole said, "would place the Federal government in the position of paying the cost of that portion of the terminal building it would use and assisting the local community in obtaining finances to provide facilities for local aircraft operations."

Is Private Management Best For Public-Owned Airports?

One of the most talked-about speeches at the recent American Association of Airport Executives convention in Oklahoma City was Bob Schmidt's discussion of "Private Management of Public Airports."

Schmidt, who is manager of the Tucson Airport Authority, was in a good position to expound his thesis that most publicly-owned airports can best be operated by private, non-profit corporations.

When Tucson found itself after the war owning a large municipal airport with a "white elephant" tag on it, 15 civic-minded businessmen banded together and became incorporators of the Tucson Airport Authority. After executing a 25-year lease with the city, the Authority took over the airport on Oct. 15, 1948. A deficit was incurred in the first few months of operation, but the airport started breaking even this spring and expects to be in the black in 1950 and to stay that way.

Flexibility. Without presuming to forecast an unqualified success for the Tucson type of airport management, Schmidt told the AAAE group he is convinced that private management has one paramount advantage over public management of most airports, that advantage being flexibility—ability to take quick action when required, changing even policy when needed.

The manager's job, he said, becomes one of implicit trust and greater responsibility, for private enterprise does stress individual performance. Salaried management holds the reins and is unencumbered with the politics and red tape involved when airports are under a city council or county commission.

Another advantage of the authority type of management, according to Schmidt, is that "eventually, the airport has to break even and pay back initial losses. We cannot dip into the public trough for operating costs. We have to produce. With local businessmen in it up to their check stubs, there is no other answer but financial success."

Setting up the premise of his discussion, Schmidt emphasized that "any airport worth operating privately while serving a public need is worthy of public ownership." On the other hand, he said, the average municipality "has no business owning, much less attempting to operate, an airport."

Greater Trade Area. He pointed out that the average municipal airport serves a much greater trade area than generally contained within its corporate limits (e.g., La Grange, Brookfield, Oak Park, Berwyn and many other independent incorporations are cashing in on Chicago's provision of terminal airport facilities).

R. W. F. Schmidt

Furthermore, he said, the average municipal airport is situated well beyond the city's police and fire protection, often having its independent water and sewer plants and otherwise creating situations of inefficiency, duplication and unnecessarily high cost.

Having stated that he believes in public ownership of airports but does not believe that the average municipality should undertake the responsibility of airport operation, Schmidt suggested "the shifting of that load to a larger beast of burden—to the county, to a special tax assessment district, to an airport authority or to the state." In other words, distribute the load over the greatest practicable area. Then, if public management fails or is incapable of handling the task, private management should be tried, he said, cautioning:

"Once you pursue that avenue, you cannot turn back, for management must be free to make long-term commitments which it must see through to termination. Set up carefully, backed by local businessmen, and encouraged by civic groups of which the respective directors and bondholders are a part, a private, non-profit group seems certain of accomplishment in measurable terms.

"If you do elect to try it, do so without reservation, for it cannot succeed if there are escape clauses. There must be no changing of minds."

Martin Heads AAAE

Don W. Martin, manager of New Castle County Airport, Wilmington, Del., was elected president of the American Association of Airport Executives at its annual meeting in Oklahoma City. He succeeds Douglas Langstaff, executive director of Moisant International Airport, Los Angeles. Other officers are:

G. Patrick Moore, Fort Worth and Chicago, 1st vice president; Cecil Meadows, director of airports, Kern County, Bakersfield, Calif., 2d vice president; Walter E. Betsworth, manager of Waterloo (Ia.) Municipal Airport, 3d vice president; and Melvin H. Nuss, manager of Reading (Pa.) Municipal Airport, secretary-treasurer.

New directors, elected for three-year terms, are: Homer D. Hoskins, Pontiac, Mich.; Jack Bolton, Columbus, O.; and Frank Hidinger, Cedar Rapids, Ia. Elected for two-year terms were: Peter G. Powell, Lexington, Ky.; Wayne Parks, Beaumont, Tex., and Francis T. Fox, Worcester, Mass. Elected for one-year terms were: David E. Leigh, St. Louis; Fred C. Alley, Charleston, W. Va., and Emory Boelson, Evansville, Ind.

Exclusive Fuel Contracts Now Allowed

The new regulations for administering the Federal Airport Act which went into effect last week (see page 44) eliminate all reference to the several requirements which previously existed in the matter of furnishing services pertaining to the sale of aviation gasoline and oil at Federal-aid airports.

This means that airport operators or municipal sponsors may make exclusive contracts for sale of these commodities and that the airlines will no longer have the protection of the so-called non-discriminatory clause of the old regulation. The old regulation permitted the airport sponsor to grant or exercise exclusive right to sell aviation fuel on their airports but it also assured all airport users the right to buy gas and oil off the field and have it delivered for their own use.

The airlines, through the Air Transport Association, fought any change in the old regulation which would deny them freedom in buying their fuel supplies. Many of the airlines have system-wide contracts with one oil company. Through these bulk-purchase contracts, they were able to get a more favorable price.

Robert Ramspeck, executive vice president of ATA, said if the airlines are required to pay the retail price at all of the airports they now serve, their collective fuel bill would be increased by $50,000,000 annually. Only a one cent a gallon increase would raise their bill $3,000,000 annually, he stated.

Under new regulations, the airlines will return to the barter basis that existed before the Federal Airport Act was passed.

State aviation officials, city governments and national airport associations were active in having the regulation pertaining to sale of gas and oil eliminated from the new regulations.

Four All-Cargo Carriers Win 5-Year CAB Approval

Nearly five years after the first applications in the Air Freight Case had been fed into the slow-moving machinery of the Civil Aeronautics Board, a tentative decision was issued April 29 naming four carriers for certification. Even then, the nature of the decision made it likely that instead of marking the end of the long drawn-out case, it would set off another round of arguments and litigation.

The Board's tentative opinion—tentative because there had been no examiner's report since additional hearings in the case were held last December, and interested parties therefore could demand oral argument before the decision could become final—awarded five-year temporary certificates for all-cargo service to The Flying Tiger Line, Slick Airways, U. S. Airlines, and Airnews, Inc.

The Flying Tiger certificate would permit that carrier to fly freight from Los Angeles and other West Coast points to Middle Atlantic and New England cities, via a northern transcontinental route passing through the Great Lakes area.

Slick Airways would be authorized to operate between Los Angeles and other California points and cities in the Mid-West, Middle Atlantic and New England areas, via a southern transcontinental route passing through Texas.

U. S. Airlines' certificate would cover north-south air freight operations between Miami, New Orleans, Atlanta and other southern cities and the Great Lakes industrial area, on one route and the Middle Atlantic area on another.

Airnews, which has been flying San Antonio daily newspapers to southern Texas points, would be permitted to carry cargo also, thus enabling it to fly agricultural products of the Rio Grande Valley northward and overcome a directional unbalance.

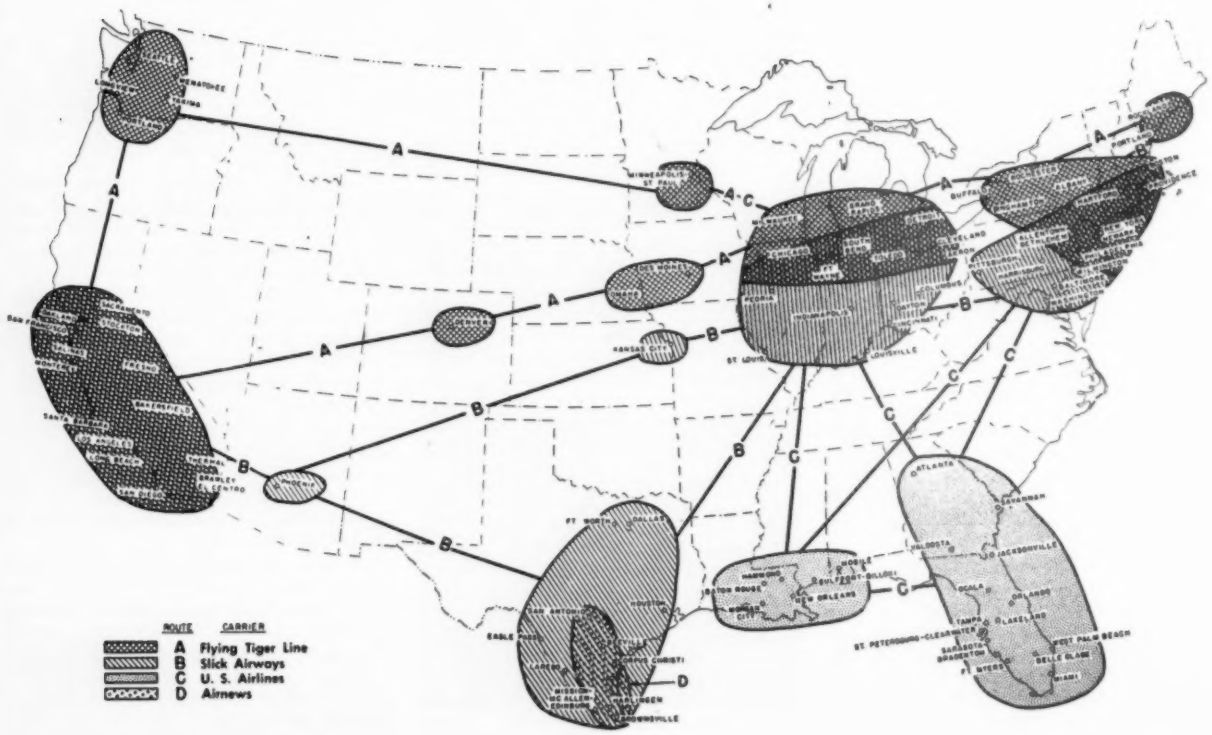
Experience & Organization. Slick and the Flying Tigers were chosen for the southern and northern transcontinental routes largely on the basis of experience and organization. Both are actively operating over such routes now and flew millions of ton-miles of freight last year. California Eastern Airways, which was recommended for certification in the examiner's report last year, was left out of the decision because it has since become involved in proceedings under the Bankruptcy Act and CAB felt it had failed to prove its fitness and ability. Flamingo Air Service was ruled out on the same grounds.

Probably the most disappointed of the numerous applicants in the case was Willis Air Service, which had been recommended by the examiners for a north-south route. U. S. Airlines got the nod on the basis of "considerably better financial condition." U. S. had suspended its air freight operations last year to conserve its resources, while Willis had contained to operate and had actually shown a profit on 1949 business.

Split Decision. The decision in the Air Freight Case was certainly one of the most difficult ones with which CAB has been confronted. This was evidenced by the 3-2 split on the decision, with Chairman Joseph J. O'Connell, Jr., Vice Chairman Oswald Ryan and Member Russell Adams comprising the majority. Members Josh Lee and Harold A. Jones dissented, the latter filling a 45-page, somewhat legalistic dissent, which observers felt would be used by any party considering an appeal from the majority action.

"If the majority thinks that the development of this air cargo system is so immensely important to the public interest to justify its decision, then it can argue with very little conviction against

Area Routes Tentatively Awarded in Air Freight Case



mail pay when these new carriers apply for it, as they most surely will," wrote Jones. Both he and Lee felt that certification of the four carriers for cargo operations only would be "the first step towards subsidy payments to them by the government."

The dissenters stressed the financial instability of the freight carriers as a group, pointing to cumulative losses of more than $1,300,000 each for Slick and the Flying Tigers as of September, 1948. Said Member Lee:

"The losses have been so heavy, so universal and so consistent as to leave little room for hope that the award of a certificate . . . will of itself change a losing operation to a profitable one."

The Post Office Department had filed a formal statement opposing certification of any duplicating carriers to perform all-cargo services, basing its protest on two main points: (1) that the present economic state of the certificated airlines makes it highly ill-advised at present to authorize additional competition for carriers who need every penny of revenue they can obtain; and (2) that there is a likelihood that all-cargo lines may some day seek government support for their operations through mail pay.

The Post Office statement, which was not made a part of the record until several days after the decision was out, expressed a fear that if an all-cargo line should be authorized to carry mail for only a few miles of its route, an opening might thereby be created through which the government could be obligated to underwrite the entire operation with subsidy payments.

The majority specifically found that the public interest did not require mail authorization, adding that "any speculation, therefore, that at some other time and in some other circumstances we might arrive at some other conclusion would have no relevance to the issues of the present case." It felt that it is in the public interest to test the possibility of developing air freight without government support by applicants proposing cargo-only service.

One Billion Potential. Estimating the nation's air freight potential under approximately the present rate level to be "not less than one billion ton-miles annually," the majority opinion held that diversion of business from the presently certificated airlines by new all-cargo carriers would be slight, assuming sufficient aggressiveness in sales promotion on the part of the former.

In other words, if the established airlines lost freight business to the new all-cargo carriers, the majority suggested, it would be only because the former was lacking in sales effort and know-how.

The decision said the new carriers will not be able to rely on passengers or mail for income but will prosper only through ability to develop an economic business by seeking new techniques, new business and new equipment. Thus, it said, the cargo carriers will provide a valuable yardstick for measuring the alertness and efficiency of other carriers of cargo, and their existence will be a "continuing spur of competition" for the established airlines.

The certificates issued under the decision would become effective June 24, unless action is instituted to upset the decision. Parties to the case had until May 19 to move for oral argument, and this would have to be followed by another decision, which in turn might be subjected to court review.

Meanwhile, the carriers favored in the tentative decision were getting set for the word "go."

Constructive Competition. Earl F. Slick said the decision constitutes "government recognition and approval of a new national industry to serve the American public," and expressed the belief that certification of all-cargo carriers "will mark the end of destructive competition and signal the beginning of a period in which all airlines interested in the development of the airfreight industry will compete constructively . . ."

Slick owns 12 C-46 cargo planes and is leasing 10 others from the Air Force. The company has 600 employes experienced in air freight operations, and is all set to expand if necessary.

The Flying Tiger Line owns six DC-4's and three DC-3's with sufficient capacity to expand to about twice its present operations. It has sufficient operating capital for operation under present plans and foresees no capital requirements for equipment purchases in the immediate future.

The Flying Tigers were planning to file an exception with CAB seeking to have St. Louis and Kansas City authorized as intermediate points on its temporary certificate on the grounds that Kansas City makes an ideal crew change point and in addition generates considerable air freight, while St. Louis is an excellent connecting point for service to the south.

The company currently serves these two points. It also was stated that the company later would ask to be exempted from serving some of the intermediates listed in the certificate, since "it is obvious that continued service to all points is not feasible."

U. S. Airlines, which owns five C-46 aircraft and three C-47's, says it will "inaugurate all of the services certificated by the Board as soon as possible after the certificate is issued and implement with aggressive action the Board's decision." General offices of the company are in St. Petersburg, Fla., and operations offices are in Atlanta.

Airnews, of which Frank G. Huntress, Jr., is president, is a wholly owned subsidiary of the Express Publishing Co. of San Antonio. It reportedly owns two DC-3's and four Noorduyn Norseman aircraft.

New Market Potential:

Feeder Lines May Soon Use Single-Engine Planes

Indications are that CAB will soon ease certain portions of CAR parts 40 and 61 which now prevent the use of single-engine aircraft manufactured after June 30, 1942, in scheduled passenger operations. This will make it possible for many feeder airlines that have been certificated but are not operating, to provide initial service to their designated routes. It will also be a boost to the air taxi business and should provide a new market for the aircraft manufacturers.

CAB's intentions were made known in a recent release that related the general plans and requested interested parties to forward pertinent data before June 1, for consideration in drafting suitable regulations. Present day limitations are governed by CAR Part 4b which establishes transport category requirements. In effect this regulation makes the use of twin-engine equipment a "must" by requiring that transport aircraft have "one engine out" performance.

By exempting single-engine aircraft from the requirements of Part 4b, the proposed changes in regulation would permit this type scheduled passenger carrying operations under visual flight rules in day time operation. It may, depending on the nature of the comments received from the industry, permit limited VFR operations at night where terrain and related factors were suited to such operations. No instrument flight rule operations or long over water flights would be permitted.

Other Concessions. In addition to the basic regulation changes which would enable the use of single-engine aircraft, several other major concessions would be made. The use of certain twin-engine aircraft would be permitted without co-pilots, use of governmental ground to air communications facilities would be permitted in lieu of company owned facilities and pilots would be permitted to assume responsibility for airworthiness and serviceability of the aircraft when a suitable ground organization is not provided.

On the limiting side of the regulations would be provisions requiring the filing of a flight plan for every flight, flight time limitations of CAR Part 61.518 would apply, weather minimums as prescribed in Part 60 would apply, and a minimum day altitude of 500 feet would be in force with night limitations, if approved, as in Part 61.

ALPA Hits Prop Rule 'Relaxation'

The Air Line Pilots Association has petitioned CAB to prohibit the CAA administrator from making changes in civil air regulations "under the guise of 'equivalent standards of safety' provisions." This is a phrase that is used in most CAR to enable the intent of the regulations to be accomplished in more than one way.

In particular, ALPA objected to the recent certification of transport aircraft with the regulations relaxed in recognition of the automatic propeller feathering devices.

CAR require certain climb characteristics with one engine inoperative and the only way in which some aircraft meet the minimum standards of this requirement is through the use of automatic propeller feathering. Behncke claimed that "licensing of these planes because they have automatic propeller feathering devices is to assume that the mechanical device will never fail under any conditions. If it does, there is absolutely no margin of safety as contemplated by the regulations. It is the duty of the Administrator to enforce the orders and regulations of the CAB. In this case, his action has amounted to changing the meaning of the regulations, not enforcing them."

The pilot's petition stated that in accomplishing this relaxation of CAR, CAA "gave no notice and invited no comment from the air carriers, the airplane industry, the ALPA or other interested parties"! The petition further claimed that the Administrator's action in this case "violates a long standing precedent and destroys the confidence and sense of security which this Association, its pilot-members and the public have had in relying upon the protection of the CAR."

CAA administrator D. W. Rentzel has stated, "If the CAB wishes to review the record of our actions in approving these airplanes, we will be happy to have them do so. The planes that have been approved under the automatic feathering provisions are the Martin 2-0-2 certificated in September of 1947, the Convair Liner in December of 1947 and the Boeing 377 in September of 1948.

The ALPA's stand on this issue is consistent with their objections to simplification of general civil air regulations since any such simplification would call for more liberal interpretations of existing regulations which could only be accomplished by the "equivalent standard of safety" provisions.

Munitions Board Approves Slope Line Approach Lights

Final approval of the CAA sponsored slope line system of approach lights has been given by the Munitions Board. This completes a long and controversial program of testing and evaluation by combined Army, Navy, Air Force and CAA representatives. The majority of the tests were conducted at the Landing Aids Experiment Station at Arcata, where about 475 low-visibility flight tests of various systems were made.

The slope line system of approach lighting consists of two rows of lights, one on each side of the runway, arranged in a design which provides the pilot with guidance from the time he is over the middle marker until he strikes the runway.

The lights consist of General Electric sealed beam lamps, 10 to a unit, mounted in a pattern which is claimed to give unusually clear guidance. If the pilot is on the proper azimuth and at the proper altitude, that of the glide path, the pilot is provided with two continuous rows of solid lights. If he moves away from this track in any direction, the lights break up and give an indication of the direction of change.

One of the major features of the light is its low cost brought about by the ability of the system to adapt itself to the terrain without mounting structures to bring it to the level of the runway. This considerably reduces the cost of installation.

There have been objections by industry representatives that a system of lights below the level of the airport, such as this system fosters in many locations, is undesirable in that the pilot is apt to fly into the ground by following the lights.

Pilot Opposition. The Air Line Pilot's Association, which has been particularly opposed to the slope line system, submitted a minority report to the Munitions Board and in the current issue of *The Air Line Pilot*, official organ of ALPA, ran an article titled "Arcata Light Tests Judged a Failure."

In this article, E. A. Cutrell, American Airline's pilot, long known for his work in airport lighting activities, and member of the ANC committee on lighting, condemned the tests because emphasis was placed on cockpit cut-off and roll guidance, operating tests were made in obsolete military and obsolescent commercial airplanes, all systems were not checked on an equal footing, and because the locality of the tests was not representative of normal operating conditions.

Cutrell also criticized the selection of Cory Pearson as a member and chairman of the Arcata Administrative Panel since he is a "proponent and advocate" of a particular lighting system, the slope line system.

CAA and the U. S. Navy have granted a contract for about $78,000 in slope line lighting equipment to the Northeastern Engineering Co., of Manchester, N. H.

Lighting evaluation will continue at Arcata indefinitely in search of improved equipment and additional data on existing equipment.

IAS Building Dedicated—Five aircraft manufacturing company presidents attended the April 29 dinner of Institute of the Aeronautical Sciences in San Diego at which the new $175,000 IAS building was dedicated. Contributors to the building fund were: Convair, $98,000; Rohr, $25,000; Solar, $22,800; Ryan, $15,000; Fleet Foundation, $11,000, and Langley Corp., $3,500. Photographed prior to the dedication dinner are, left to right: E. T. Price, president, Solar Aircraft Co.; La Motte T. Cohu, president and general manager, Consolidated Vultee; John K. Northrop, president, Northrop Aircraft, and dedication speaker; T. Claude Ryan, president, Ryan Aeronautical Co., and H. I. Mandolf, president, Langley Corp. The plan for the new IAS building was originated by Reuben H. Fleet, head of the Fleet Foundation, during his IAS presidency in 1944.

$20 Million for Equipment

U. S. airlines will spend approximately $20,000,000 during the next five years for airborne equipment, according to estimate made by Milton W. Arnold, v.p.-operations and engineering for the Air Transport Association. Most of purchases will be tied in with RTCA transition program.

Why RFC Should Guarantee Airline Equipment Financing

(There is a growing belief among both financial and government leaders that the Reconstruction Finance Corporation should aid certificated airlines in new equipment programs by guaranteeing equipment trust arrangements. The subject is timely and critical, and few individuals are as qualified to discuss it as Charles H. Babb, president of The Babb Company, Inc., which for 25 years has been top ranking international dealer in aircraft and equipment— The Editors.)

By CHARLES H. BABB

We, Americans, are fond of magic words—especially when they spell an easy solution to a tough problem. Today the magic word in airline financing is "equipment trust obligations." To many, this financial arrangement which has been so successful in the railroad industry has come to represent a sort of panacea—a cure-all-end-all of airline financial troubles.

Babb

I believe "equipment trust financing" similar to a railroad agreement contains within it a possible solution to many of today's airline financial problems—especially if the RFC guarantees the arrangement until it becomes a seasoned instrument, as was suggested recently by CAB Member Harold Jones.

However, having weathered depressions, wars and aviation famines myself for some years, I'm suspicious of the simple solutions that contain the answer to all problems at one sweep.

Equipment obligations are a special sort of lien bonds commonly used by railroads to obtain money at low rates by pledging rolling stock. Their record I understand is good. There have been few defaults and practically no losses to railroad investors. As a result the instrument enjoys wide prestige.

Protection for Creditor. From a creditor's point of view, the basic strength of an equipment trust obligation lies in the fact that when the sheriff knocks at the door in a bankruptcy proceeding the creditor who holds equipment trust certificates does not forfeit his assets.

In the railroad field, the legal mechanism for issuing this form of security is complicated. Usually, the purchaser who wants flat cars or locomotives puts in his order with a manufacturer and at the same time arranges with a trust company to put up a large percent of the capital required, with the balance paid in by the railroad.

When the trust company takes title, an investment banking house is called in to sell certificates of interest in the property—this interest constitutes a direct lien on the equipment. The railroad executes a lease with the trust company which calls for yearly payments until the loan is repaid at which time title passes to the railroad.

These obligations mature more rapidly than cars depreciate so that protection of the security tends to increase rather than lessen as time goes on. Note this: Because railroad cars and locomotives have a comparatively uniform structural form—depreciation can be established fairly accurately.

Earning Capacity. The value of most financial instruments lies in the earning capacity of the security behind the instrument. In addition, in the case of railroad equipment trust agreements, several other factors are supposed to enhance their value.

Assets are mobile and so their earning power can readily be transferred to a neighboring line. Also, rolling stock is the income producing unit without which there can be no hope of revenue, in fact without which there can be no operation, and we have ample precedent that public policy will force a railroad franchise holder to operate even at a loss.

I am examining the workings of these equipment trust agreements in the railroad industry and outlining the reasons commonly given for their success because I want to point out where it is safe to compare the airline situation and where the railroad experience is not of value.

As far as the legal workings of the instrument is concerned, I am happy to see that due to the enlightened laws concerning liability of trustee arrangements which were passed as a result of the recommendations of the President's Air Policy Commission and the Congressional Commission last year, we now have one vexing problem out of the way. I am also happy to note that ICAO is taking further steps to validate these trust agreements in all jurisdictions throughout the world.

With security like an airplane that can fly from one nation to another in a matter of hours, this is important. In addition, the problem of registering, with separate lien holdings, engines and accessories is behind us. However, because the legal aspects of the equipment trust agreements are being straightened out we must not forget there are many problems yet to be faced before this arrangement can be considered a seasoned instrument.

I have stressed the fact that the inherent value of most credit instruments, stocks or other security lies in the fact that the earning capacity of the underlying security constitutes the real value, i.e. a bomber may cost $1,000,000 but in time of peace have no value because it has no earning capacity—while a transport plane may have only cost $250,000 to build but be worth much more than its original price due to its day to day capacity to make money for its owner.

This factor of earning capacity, when linked with standard depreciation figures, provide an accurate forecast of value so the money lender has sufficient data on which to operate.

Rail Trend Predictable. Obviously in any forecast of this kind, the forecaster must have a reliable projection of the demand curve. With railroads, traffic loads can be forecast not only in general but for a particular railroad because the possibility of a new entry into the field which might take away some of the traffic can be discounted.

Also, the production potential of the railroad equipment manufacturers at any one time, in relation to the total number of locomotives and freight cars in use, is exceedingly small, so that forecasts of future potential will not be disturbed by a sudden large increase of new units in any given year which could seriously affect the total value of all railroad rolling stock.

Obsolescence is always a factor intimately associated with depreciation. In the highly dynamic aircraft industry, perfectly adequate depreciation figures based on the physical concept of how long an airplane can stay in use from a mechanical point of view many times are invalidated if new and superior products are introduced into the field which outclass older equipment long before they wear out.

Obsolescence Factor. In the field of aircraft since the war for instance, we have seen Lockheed Lodestars and even DC-3's which were mechanically good for many years, replaced by airlines with Scandias, Martins, and Convairs. This suggests that a field as highly dynamic as aviation, with jet transports in the offing, the factor of obsolescence will play a far more important part in any forecast of future potential value than will figures based on depreciation.

Maintenance of equipment is of more significance in the case of airplanes as compared with railroad rolling stock. The RFC experience with loans to veterans on C-47's and C-54's revealed that if maintenance is neglected even for a short period, the entire item must be written off. I have inspected many planes that have been ruined prematurely through lack of maintenance.

This aspect of a trust agreement set-up must be explored to insure that the money lender has adequate protection

while at the same time the borrower does not have to suffer an undue hardship.

Unstable Legal Thinking. Unlike the railroad industry and its traffic pattern, the air transport industry is still in a relatively fluid stage. Whereas we know in the case of railroads that public policy will demand continuance of a section of a line regardless of whether it shows a profit, this is not as clear in the case of an airline.

When the CAB talks about merging airlines, an equipment trust lender feels that "maybe I will be left with an equipment lien on an airplane owned by an airline which the CAB finds redundant." The case of George Baker's National Airlines can't help but drive home to all investors the unstable condition of the legal thinking concerning the vested rights of certain carriers. In fact, many investors still have not recovered from the shock of '34.

Therefore, in view of these many dissimilarities between the railroad industry and the airline industry, I feel that it is dangerous to try to impose one of the credit instruments which has applied to the railroad industry on to an airline industry without a long and careful study under actual working conditions. There must be a seasoning period in which the effect of some of the obstacles I have outlined are given a chance to iron themselves out.

Temporary Aid Only. I would like to see Mr. Jones' suggestion of an RFC guarantee of privately placed equipment trust obligations taken up. This will give private capital interests a chance to gain experience under favorable conditions.

Financial history shows that once the investment field gets a chance to gain actual experience which will give it confidence, it is anxious to have an agency like the RFC fade out of the picture. Today's experience with the veterans' guaranteed G.I. loans illustrates this tendency clearly.

On the other hand, if we merely turn to government financing without any recourse to private financial sources, there can be no period of seasoning under private financing so that airlines are forced deeper and deeper into dependence on government bounty rather than straight business incentives. This can never be a happy alternative.

3 Large Cargo Lines Report '48 Profit

Three of the larger all-cargo carriers earned a profit on 1948 operations, and the combined net loss for the group of 10 lines was a little over $750,000, according to revenue reports filed with the Civil Aeronautics Board.

The group, composed of Slick Airways, The Flying Tiger Line, Flamingo Air Service, California Eastern Airways, U. S. Airlines, Willis Air Service, Air Cargo Transport, Pacific Overseas Airlines, Trans-Hawaiian and Riddle Aviation, flew an aggregate of 42,010,109 ton-miles of freight in 1948.

Large Cargo Carrier 1948 Operating Results

Carrier	Ton-Miles Flown	Net Profit or Loss
Air Cargo	253,845	–$26,795
Cal-Eastern	4,445,593	–$227,601
Flamingo	521,651	–$31,600
Pacific Overseas	N.A.*	–$58,127
Riddle	1,449,373	$33,637
Slick	25,579,493	–$144,019
Trans-Hawaiian	883,388	–$67,719
Tigers	6,781,521	$51,758
U. S. Airlines	391,182	–$313,489
Willis	1,654,063	$24,881
Totals	42,010,109	–$754,360

* Not available.

Best financial showing among the freighters was that of The Tigers, who earned a profit for the year of $56,472 on operating revenues of $1,550,854 and operating expenses of $1,494,382.

Riddle was next in line with a net profit of $33,617 on operating revenues of $259,801 and operating expenses of $226,444, and Willis was close behind with a net profit of $24,881 on revenues totaling $337,564 and expenses amounting to $311,753.

One of the largest losses was that of Cal-Eastern, which filed a petition for reorganization in May of last year and ceased operating as a freight carrier at that time, leasing its planes to other carriers. Its operating loss for the year was $314,519 on gross revenues of $927,987 and expenses of $1,242,506. The net loss was $227,601.

Slick Airways, largest of the freight lines, had a 1948 net loss of $144.019 on operating revenues of $4,187,781 and operating expenses of $4,332,324.

Self-Supporting Feeders?

Eyebrows were raised in the Senate airline investigating committee hearing May 5 when James G. Ray, feeder airline consultant, ventured an opinion that two of the certificated feeders already are in fact operating without subsidy and paying the government a return on its investment.

Feeders named were Pioneer Air Lines and Southwest Airways, and Ray said he was confident they would be found to be in the non-subsidized class when all balancing payments to the government—air mail postage stamps, the 15% tax on transportation, and other forms of taxes—are computed.

He said the feeders have made a good beginning and predicted continued improvement if time is afforded them to develop the full potentialities of their routes.

United's 1st Quarter Loss

Despite slight reductions in its revenue ton-mile and operating ton-mile costs, United Air Lines had a first-quarter net loss of $3,323,136. Adjusted loss for the comparable 1948 period was $1,931,649.

The company's explanation cited a 27% increase (from 26,557,797 to 33,616,897) in ton-miles flown, a 31% increase in available capacity, a decline in revenue passenger-miles (from 13,115,618 to 11,709,721), and a 22% rise in total operating expenses (from $17,006,519 in the first quarter of last year to $20,727,415 this year).

Operating revenues were up from $13,644,973 to $17,657,290.

Mail Pay Tie-Up Averted

An attempt on the part of Seaboard & Western Airlines to tie up indefinitely the more than $15,000,000 in mail pay awarded Apr. 20 to American Overseas Airlines and Pan American Airways fell through on May 3 when the U. S. Court of Appeals refused to issue the indefinite stay requested by S&W in connection with its appeal of CAB's order granting it limited intervention in the two mail rate cases.

A temporary restraining order was dissolved and the carriers were free to begin necessary steps for collection of the mail pay through the Post Office Department.

FINANCIAL BRIEFS

American Overseas Airlines showed a profit after taxes of $990,877 for 1948, compared to a loss of $1,773,220 for the previous year. Operating revenues last year amounted to $23,537,458, an increase of more than $3 million, while the year's operating expenses of $21,653,363 were less than in 1947. Company's $10 million credit for purchase of eight Stratocruisers has been extended six more months. To date a total of $3,000,000 has been drawn upon the loan.

Eastern Air Lines reported first-quarter earnings of $1,298,065, or 54c per share, as compared to a net of $1,121,144 or 47c a share for the same period last year.

Mid-Continent Airlines had a profit of $2,453 for the first quarter of this year, as against a revised net loss of $70,730 for the same quarter last year. Operating revenues were up 18% to $1,654,635, while operating expenses of $1,662,056 were 10% higher than last year. Net profit for March was $37,265.

National Airlines reported a net profit of $717,929 for the Mar. quarter, third quarter of its fiscal year. The profit reduced NAL's loss for the nine-months period to $108,845, not inclusive of mail pay of $390,000 awarded recently but not yet received by the company. Also not reflected was $1,386,000 recently received through sales of originally authorized but previously unissued common stock.

Trans-Canada Air Lines reports a 1948 net loss of $1,183,022 on its transcontinental operations after charges for depreciation and interest, and a net loss of $1,750,218 after depreciation and interest on its overseas operations. The transcontinental system showed a net operating profit of $1,616,965 on total revenues of $20,866,936, highest in TCA's history, and operating expenses of $19,249,971, up 30% over 1947.

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DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON
TYPE CERTIFICATE No. 259
This certificate, issued to Wright Aeronautical Corporation
Wood - Ridge, New Jersey
certifies that the following is of proper design, material, specifications, construction, and
performance for safe operation, and meets the pertinent minimum standards, rules, and
regulations prescribed by the Civil Aeronautics Board:
963C9HE1 and 2
967C9HE2
968C9HE1 and 2
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By direction of the Administrator:
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NEW POWER FOR THE "SUPER" DC-3

. . . Cyclone 9 Now Certified at 1475—1525 Horsepower

The CAA has issued a Type Certificate approving the Wright Cyclone 9HE — with a take-off power range of 1475 to 1525 horsepower—for commercial air transports.

To the Douglas "Super" DC-3 this latest version of the world-famous family of nine-cylinder Cyclones brings . . .

. . . *new power*—1475 to 1525 horsepower for improved take-off performance.

. . . *light weight*—the lightest weight engine in its power class. The Cyclone 9HE weighs only 1390 pounds — less than one pound per horsepower.

. . . *economical operation* — because of lower fuel consumption and improved cylinder cooling characteristics.

. . . *low maintenance and overhaul costs* — because of the simplicity of design inherent in single-row, radial engines.

. . . *other advanced features*—torquemeters for accurate power control and to permit use of automatic propeller feathering — water injection for maximum take-off horsepower with 100 octane fuels.

Since its early association with the Douglas twin-engined transport, the Cyclone 9 has steadily progressed with this "father of the airliner." Today it is ready again to improve the performance and extend the usefulness of the DC-3.

POWER FOR AIR PROGRESS

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'Slim' Faucett Finds Profit In Peruvian Jungle Airline

By WAYNE W. PARRISH

There's an airline in South America that last year carried over 90,000 passengers, 264,000 lbs. of mail and over 11,000,000 lbs. of cargo, and has never published a timetable of schedules and fares.

But that's just one of the unusual features of the airline which Faucett Aviation Company operates throughout Peru. The name of Elmer "Slim" Faucett has been synonymous with aviation in Peru since he started his airline in 1928. An American who wandered down to South America in the early Twenties, Faucett is virtually a legendary figure along South America's west coast.

He was the first to fly the Andes in 1922, he built his own airplanes when there wasn't a suitable type available on the market, and he has developed a sizeable operation and a big company out of a very small beginning.

This year Slim is out to make Faucett Airlines a first class show. A few months ago he put stewardesses on the line. He's fixing up the interiors of his airplanes. Bit by bit he is installing aerophares and communications equipment around the country. (He has 22 ground stations operating now.)

He has two DC-4's and is looking for a couple more. He thinks by the end of 1949 he'll have an airline second to none in the world. His first published timetable is due out soon and next he's going after the tourist trade to supplement his local passenger-mail-cargo business.

First Flight. I've talked with Slim on several occasions since I first met him in 1940, but it wasn't until a few weeks ago that I had my first flight on his airline. I decided to take the one-day round-trip flight from Lima to Iquitos, an isolated town of 50,000 at the headwaters of the Amazon on the east side of the Andes in the far northeastern corner of Peru. It's about three to four hours each way, depending on weather and route.

The flight was in a DC-4, filled with the local citizenry and their boxes and bags and plenty of cargo. Capt. Wait Johnson was the skipper and he has flown this rugged route for three years. His co-pilot was Marvin Freeman. The stewardess was Senorita Mary Tamayo, who comes from the arid section of Peru and who was panic-stricken by the tropical rain in Iquitos—the first rain she had ever experienced.

After leaving Lima the plane headed north and kept climbing until it reached 19,500 feet. Then it headed over the Andes, by-passing peaks sticking up to over 22,000 feet, and decended to the trackless jungle on the other side. Every map simply says "unexplored territory" for this vast jungle area. It is an awesome and uninviting sight. No sign of habitation for hundreds of miles, nothing but dense jungle and ugly rivers snaking their way to break up the solid green mass.

Each passenger is given an oxygen tube going over the Andes, and Slim will have to devise some more sanitary means of keeping his passengers alive if he attracts tourists. Each Latino sucks vigorously on the raw end of the tube for about an hour. Like the old town drinking cup, those tubes have seen a lot of service. But at 19,000 feet it's either use the oxygen or pass out.

My trip was an ill-fated one. We had engine trouble half way to Iquitos, and it turned out to be a valve that went haywire. Instead of trying to change it in three to four hours as is customary, and getting back to Lima late in the day, Capt. Johnson announced we would depart at 5 a.m. the following morning. So I was stuck in Iquitos over night and missed my Braniff inaugural flight to Rio. The moral: airplanes sometimes don't complete their schedules. (There are still a few things about that delay I'd like to know.)

Jungle Trading Area. But I learned a lot about Iquitos in the afternoon and night I was there. It is an important jungle trading area located 2300 miles up the Amazon from the Atlantic. Ocean-going vessels of up to 5000 tons navigate the river easily and until the coming of the airplane the entire trade and cultural outlook for Iquitos was with Europe and especially with England. Boats operated direct to there from Liverpool.

Today Iquitos has good air connections with Lima and the communication with Europe has diminished. The town has become quite dependent upon the airplane. In fact the airplane has moved the town's influence and trade from the Atlantic Ocean to the Pacific. It is an outstanding example of how the airplane has overcome terrain barriers and shifted an entire trade route.

Faucett hopes to install an aerophare (homing beacon) at Iquitos. The government operates one there now but, as the pilots say, it works fine when you get in sight of it. There is no telegraph or telephone line into Iquitos, no road or even a trail. It is reached only by river or by air. And the air trip is an experience. Once in awhile Panair do Brasil operates a Catalina flying boat up the Amazon to Iquitos from the east and eventually will have a regular connection with Faucett, but Brazil and Peru are still haggling over a bilateral air agreement.

Faucett operates twice weekly to Iquitos with a DC-4 and reaches there also on a DC-3 local route. He has good service to fabulous Cuzco in the Inca country, to Arequipa, and to about 40 other points. Some routes operate once or twice a month. He has seven DC-3's and still operates some of the single-engined airplanes which he built in Peru for his early services. The Faucett airplane was an enlarged version of the old Stinson Reliant.

Blackboard 'Timetables.' Instead of timetables, Faucett has used big blackboards which he places in front of his ticket offices. Chalked on these boards are announcements of arrivals and departures and news of shipments for individuals.

Everybody in each town goes by the Faucett office to see if a package has arrived from a store or relative in Lima. Faucett has been a very vital factor in Peruvian social and economic life.

Starting out with 100 passengers and 302 lbs. of mail in 1928, Faucett has expanded consistently except just after the Pan American highway opened in 1939 when he lost coastal traffic to buses, and during the World War II period when he couldn't get enough pilots. From 58,000 passengers in 1947 he jumped to over 90,000 in 1948.

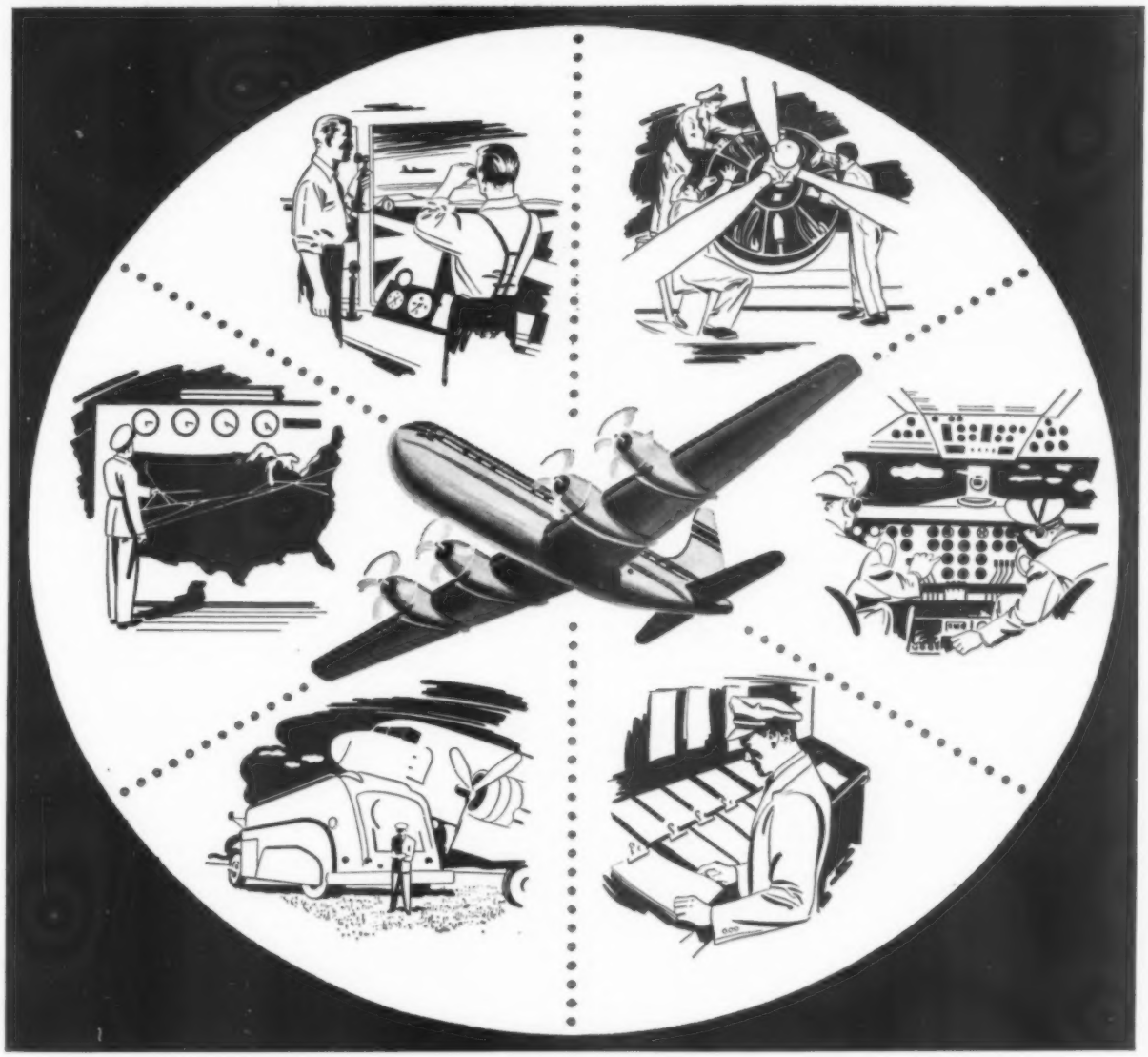
The extent of his express business can be visualized easily by noting that he carried 9,125,000 lbs. in 1947 and 11,710,600 lbs. in 1948. His passenger miles in 1947 amounted to 22,500,000.

Faucett has had an excellent financial record. He has made a profit and paid dividends almost every year since he started. Some of the dividends have been quite fat. In 1948, due to rate cutting with several postwar competitors, he didn't make any money, but the outlook is good for a profit this year.

In 1947 Faucett had a profit of $500,000, certainly one of the largest profits of any airline in the world for that year when most airlines were losing heavily.

Slim Faucett is a salty character, a familiar figure in Peruvian social life and along the main streets of Lima. His ticket and general offices are in the Bolivar Hotel on the main square of Lima, the best spot in town.

Considering that he has operated in a country beset by many government revolutions, and with a currency exchange less than favorable for buying equipment in the U. S., he has done one of the truly remarkable airline jobs in the world. He rates a full-length book. And now, after 20 years of virtual barnstorming, his airline is beginning to put on a front and a party dress.



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Interchange Okayed For Capital, National

Officials of Capital Airlines and National Airlines have begun a series of conferences seeking to implement an equipment interchange agreement conditionally approved by the Civil Aeronautics Board May 3.

The agreement would make possible the operation of through services between Capital cities on Routes 14, 34 and 46 north of Washington and cities south of Washington on National's Route 46. Initially, it would apply only between Minneapolis-St. Paul, Milwaukee, Detroit, Cleveland, Buffalo, Pittsburgh, Washington, Charleston, Jacksonville, Tampa and Miami. Additional interchanges could be applied for on 15 days' notice.

CAB thought the interchange would help level out season traffic changes for the two carriers, provide better utilization of personnel and equipment, result in savings in operating costs as volume grows, improve connecting service to cities not served directly by interchange, and give more convenient and expeditious handling to traffic now moving through connections at Norfolk and Washington.

"There is no doubt," it said, "that the nature and character of the operations of the two carriers concerned lend themselves to an equipment interchange."

Operation of the interchange was made contingent upon compliance by both carriers with provisions of the Railway Labor Act and existing bargaining agreements to resolve conflicts between their provisions and the interchange pact.

EAL Gets Pittsburgh Stop

In three different cases, Eastern Air Lines had applied for CAB authorization to serve Pittsburgh, one of the few large cities in the east not served by it, and three times its applications were denied. Finally, this month, EAL got permission to serve Pittsburgh, but the authorization was hedged with restrictions.

Although authorized to serve Pittsburgh as a Route 6 intermediate point between Akron, O., and Charleston, W. Va., Eastern is prohibited from engaging in local air transportation between Pittsburgh on the one hand and Akron, Cleveland or Detroit on the other; between Pittsburgh on the one hand and Atlanta, Birmingham, Mobile or New Orleans on the other; and between Pittsburgh and Charleston, W. Va. Furthermore, its proposal to add Elkins, Fairmount-Morgantown, Clarksburg and Wheeling to Route 6 was denied.

Southern Seeks Capital

Planning to inaugurate service in late May or early June over a portion of its certificated feeder air route, Southern Airways is seeking to raise funds for equipment purchases and working capital through an offering of 100,000 shares of $3 par value common capital stock.

Frank W. Hulse, president, said that after the first segment was opened, service would be extended to the remainder of the 1,432-mile route system as rapidly as possible, consistent with orderly training of personnel and familiarization flights. Passenger fares will be about 6c per mile.

Using DC-3's with integral loading steps, Southern expects to make minimum stops of two to three minutes, cutting only one engine. Male flight agents will be used and no meals will be served. The feeder will operate its own ticket offices only at major cities, contracting for this service with local operators at other stops. Ground services also probably will be handled on a contract basis.

Trans-Pacific Airlines of Honolulu is making arrangements with Transocean Air Lines for the purchase of two more DC-3's to bolster its present fleet of four DC-3's. TPA will start scheduled interisland service about June 1.

New UAL Hangar— Construction of United Air Lines' hangar and shop building at Seattle-Tacoma Airport, pictured in the architect's drawing above, will start May 16. Seattle firm of Young and Richardson, architects and engineers, designed the building. The first contract, for the structural steel work, went to the Pacific Car and Foundry Co., also of Seattle. Structure will include 8,300 sq. ft. of floor space in the shop area and a nose hangar 260 ft. long by 70 ft. deep.

CAB CALENDAR

May 16—Hearing North Atlantic Route Transfer Case. (Docket 3589 et al.) Tentative. Place and hour to be announced. Assistant Chief Examiner Thomas L. Wrenn.

May 16—Hearing in Reopened Hawaiian Case. (Docket 851 et al.) 10 a.m., e.d.s.t., Room 1011, Temporary Building No. 5. Examiner Ralph L Wiser. Postponed from May 2.

May 25—Hearing in Service to Newport News, Va., Case. (Docket 3238 et al.) Tentative. Examiner James M. Verner. Postponed from May 16.

May 25—Hearing on application of K.L.M. Royal Dutch Airlines for three-year extension of its Aruba-Curacao-Miami Foreign Air Carrier Permit. (Docket 3683). Tentative. Examiner Lawrence J. Kosters.

Aviation Calendar

May 16—Kentucky Aviation Forum, State Office Bldg., Frankfort.

May 17—National Safety Council, Air Transport Section meeting, UAL offices, San Francisco.

May 19-20—AIA's 5th NAS Council Meeting, Navy Bldg., Washington.

May 21—California conference on private flying, Fresno.

May 22—"Airport Open House," Wold-Chamberlain Field, Minneapolis.

May 23-24—AIA'S 14th NASC national meeting, Washington, D. C.

May 24-26—AIA Board of Governors annual conference, Williamsburg, Va.

May 24-27—Joint I.A.S.-Royal Aeronautical Society Conference, New York City.

May 27-30—Women's National Aeronautical Association convention, Chase Hotel, St. Louis.

May 29-30—Aeronautical Training Society annual meeting, Baker Hotel, Dallas, Tex.

June 1-4—Aviation Writers Association convention, Statler Hotel, Washington.

June 3-12—Michigan Aviation Week, (Auspices Aero Club of Michigan, Book Bldg., Detroit).

June 4-5—Third Annual All-Woman Air Show, Miami, Fla.

June 4-5—Fourth Annual Air Fair & Industrial Exposition, Shawnee, Oklahoma.

June 17-18—Fourth Annual Ohio Aviation Clinic, Bowling Green State University.

June 18—Third Annual Air Show, Anchorage, Alaska.

June 19—Walla Walla, Wash., Air Fair.

June 20-21—Aviation Distributors and Manufacturers Association officers, directors, Broadmoor Hotel, Colorado Springs.

June 23-25—California Association of Airport Executives convention, San Francisco.

June 26-28—National Aeronautic Association annual convention, Akron, Ohio.

July 2-10—16th National Soaring Contest, Elmira, N. Y.

July 19-21—NASAO Board of Directors, Grand Hotel, Mackinac Island, Mich.

July 20-21—I.A.S. Annual Summer meeting, I.A.S. Bldg., Los Angeles.

International

May 17-28—IATA Technical Conference, Burgenstock, Switzerland.

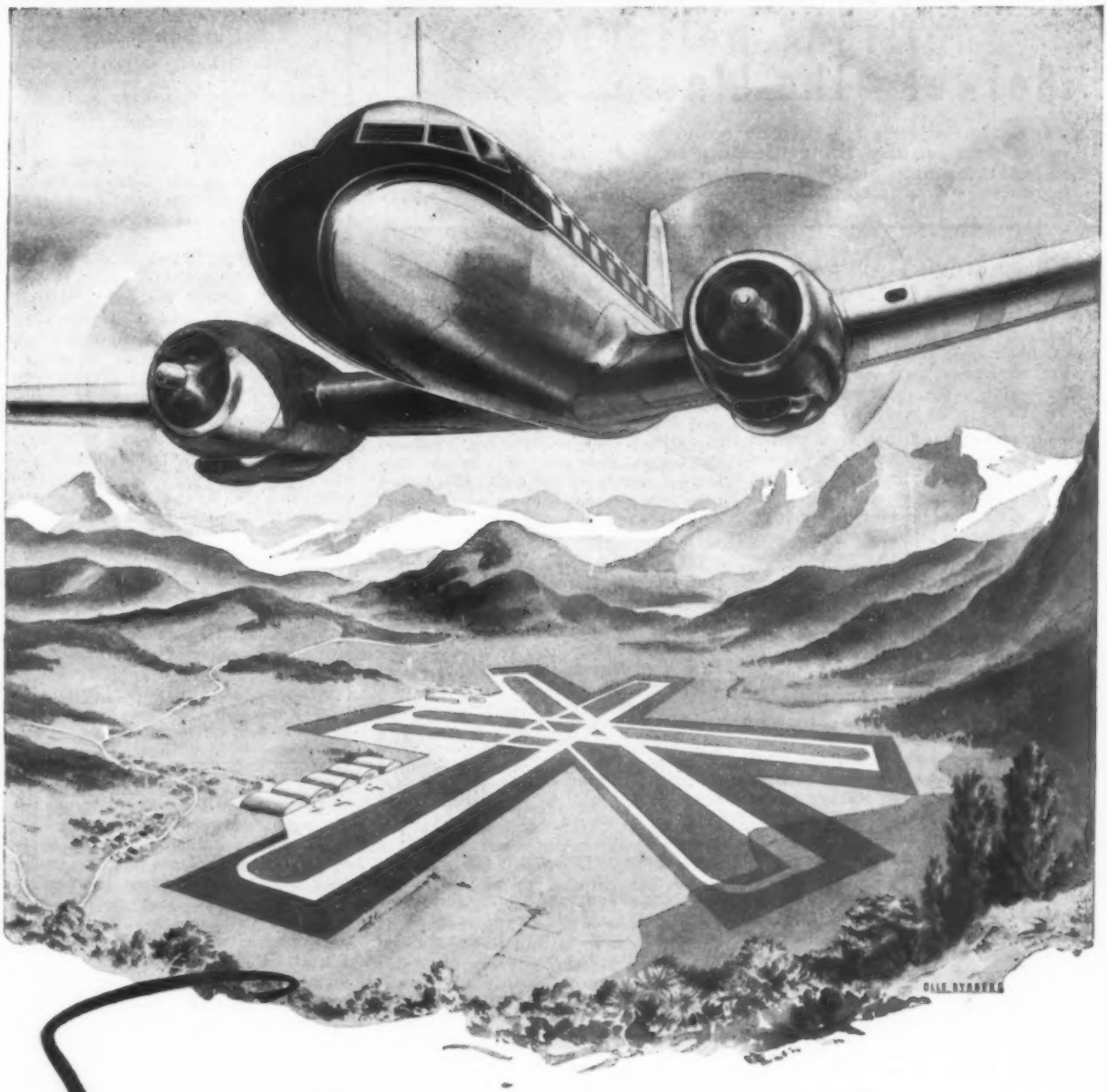
May 23-25—IATA Financial Committee, Nice.

May 30—IATA Technical Committee meeting, Burgenstock.

June 1—ICAO Subcommittee meeting on Revision of Warsaw Convention, Montreal.

June 1—ICAO Subcommittee meeting on Revision of Rome Convention and Brussels Protocol, Montreal.

June 1—ICAO Subcommittee meeting on Definitions, Montreal.



Scandia takes off...

with perfect safety even from small and obstructed airports.

Moderate wing loading in combination with outstanding aerodynamic design gives the Scandia extraordinarily good take-off and landing qualities. Thanks to the great excess power and the excellent high altitude performance of the engines it is also possible to operate the Scandia from high altitude airports without any large increase in take-off and landing runs.

In short, the Scandia is an ideal passenger plane for continental routes — in all parts of the world.

PERFORMANCE

All figures refer to standard atmosphere

	Airfield altitude: Sea level	Airfield altitude: 5,000 ft
Max. take-off weight	32,408 lbs	30,650 lbs
CAR runway length for take-off	*3,690 ft*	*5,055 ft*
Max. landing weight	31,967 lbs	29,700 lbs
CAR runway length for landing	*2,950 ft*	*3,070 ft*
Stalling speed (T.A.S.)	78 MPH	83 MPH
CAR 180° min. turn radius (completed in 15 seconds)	650 ft	

SVENSKA AEROPLAN AKTIEBOLAGET · SAAB AIRCRAFT COMPANY · SWEDEN

Between the Lines

By James J. Haggerty, Jr.

Let B-36 Prove Claims

We made an effort, recently, to settle (in our own minds, at least) the interminable controversy on the abilities of the Convair B-36 bomber. We are unhappy to report that our effort has failed——due to the apparent reluctance of the Air Force to settle it.

We refer to the fact that we offered to fly in a B-36 at 40,000 ft. while jet fighters tried to intercept it, so that we could determine first hand whether the information on the invulnerability of the B-36, which is being so liberally disseminated, is accurate. We regret to report that the Air Force has decided to stand pat on its press releases and has refused to permit observers to ride in its six-engine pride and joy, for reasons so vague and so various as to make us wonder if perhaps the real reason isn't that the claims for the airplane have overstepped its abilities.

In the latter part of February, as we reported in these dispatches, we went over to the Pentagon and were briefed on the newly discovered abilities of the B-36. The gist of that interview was this: that the Air Force had discovered that jet fighters could not maneuver with, and consequently could not successfully intercept, the big bomber at altitudes above 40,000 ft.; that actual tests at Eglin AFB, Fla., had shown that the speed margin between the B-36 and the fastest jets was only 80-100 mph, due to a power decline in the jet engines at high altitudes; that the B-36 can indicate 195 mph at 40,000 ft. and consequently attain a *true* air speed of 365 mph; and that it can remain at this altitude for 12 hours or more.

AF Hedges. This sounded at the time like good, honest information (and we're still not prepared to say it isn't). But being of an extremely skeptical nature, we said that this information was a little hard to believe, and would there be any objection to our flying on one of these interception missions so that we could note for ourselves the airspeed indicators, altimeters, power settings, fuel consumption and the comparative maneuverability of the B-36 and the attacking jets at 40,000 ft. We were assured that we could and steps would be taken posthaste to arrange it.

That was eleven weeks ago.

Shortly after this interview the Air Force began to hedge. There was some mumbling about security. But hadn't the security been lifted at our interview when we were given detailed performance data? Then they changed the tune—the new reason was that the Defense Secretary wouldn't like it because it smacked of inter-service competitive publicity (which seldom troubled the USAF until lately).

Then they thought of a new one—so many people had made similar requests that it would be impossible to accommodate all. But at the time we made the request only one other of our colleagues was in on the deal. There have been other reasons advanced to others who have made the request—all equally vague.

Whatever the reason, it is obvious that the Air Force is not anxious to have observers flying in its B-36.

Company Confident. Convair officials do not share this reluctance—they have confidence in their airplane and can't understand the Air Force attitude.

If the B-36 can do everything claimed for it, then the Air Force is making a public relations blunder by refusing to prove it. If it cannot, then it is guilty of duping the taxpayer. With all security regarding the plane's performance having been lifted by the Air Force's own action, and with the responsibility for the defense of the nation concentrated in this plane by actions of Congress and the Defense Secretary, we can see little reason why the guy who kicks in a large chunk of his weekly pay check to pay for B-36's shouldn't be told whether it's worthwhile.

Continued refusal by the Air Force to back up its loudly proclaimed contentions as to B-36 performance can only result in suspicion on the part of observers, which would be reflected in a new loss of public confidence in the plane. And a lack of confidence on the part of John Q. Public in what has been selected as the nation's first line of defense is not a good thing for the country's peace of mind.

Worth the Cost

As we go to press, the need for the Berlin air lift is ended. We say the need because, according to the best information available, the lift will keep right on going. MATS has received a directive to continue to fly supplies into Berlin. No termination date was mentioned in the directive, but it is believed that the plan is to build up a six-month food backlog in the city as a precaution against another blockade.

There is no doubt that the Berlin lift was the greatest air transport operation of all time. It's pretty hard to describe the magnitude of the operation. You might use an old bromide such as the fact that the lift planes flew the equivalent of 2800 times around the earth at the equator, but that doesn't mean much. Perhaps the best indication is a comparison with the war-time China-Burma-India "Hump" operation, previously considered the greatest air transport operation.

In the "Hump" operation, AAF flyers hauled 685,000 tons of supplies in approximately 30 months; in Germany, the combined British-American lift flew more than twice that tonnage in less than eleven months. MATS alone flew about 1,210,000 tons into Berlin, in the peak month of the Hump mission (July, 1945) 71,042 tons of cargo were lifted; this compares to the April, 1949. "Vittles" figure of 195,915 tons lifted by MATS alone. Despite the fact that the distance between Hump terminals was more than three times that of the Vittles terminals, the combined British-American Berlin lift also topped the Hump in ton miles flown in a single month, with approximately 57,000,000 ton miles for Vittles in April of this year and 53,000,000 for the Hump in July, 1945.

When the costs are finally totaled, it will probably have cost the Air Force alone more than $180,000,000. But it was worth it—in the development of new techniques, in operational experience and in American air power prestige.

Berlin Box Score

June 21, 1948 to May 12, 1949

Tonnage flown into Berlin	
U. S.	1,210,000
British	365,000
Total	1,575,000 tons
Ton miles flown	
U. S.	272,250,000
British	82,125,000
Total	**354,375,000**
Hours flown	
(U. S. aircraft only)	411,000
Miles flown	
(U. S. aircraft only)	70,000,000
Total Cost (to USAF only) (as of May 4)	**$174,238,100**
Operating cost	$54,449,700
Support cost	61,178,000
Reserve for termination costs	40,541,100
Cost of wrecked aircraft consisting of 18 C-54's, 2 Navy R5D's, 8 C-47's and 1 C-82	$7,522,000
Depreciation (based on normal plane life of 8400 hrs. with no salvage value)	10,547,300

Planes in operation as of May 12:

314 C-54's
22 R5D's
5 C-82's
1 C-97

342*

* Includes 84 C-54's in maintenance pipe line and 16 at Great Falls AFB, Montana, training school.

New Reserves Needed

An interesting viewpoint on the air reserve situation was provided at the May luncheon of the Aero Club of Washington by Rep. Carl Hinshaw, a California Republican who has long been interested in air power and who is a Congressional rarity in that he knows something about it.

Hinshaw brought to light a point to which we must confess, we haven't given too much thought: the fact that we don't have much of a reserve of trained, competent airmen, despite the popular notion that we have a bottomless reservoir of same, since we trained so many during the war.

Hinshaw pointed out that, in 1941 when the war started, the average age of our aircrewmen was about 21; now, almost eight years later, Mr. Average Airman is pushing 29. In 1952, generally accepted as the date when Russia will have the atom bomb and hence the critical year, he will be 31 or 32. And a large portion of our reservists are over the average age.

It is obvious, Hinshaw says, that these men, who have or will have by 1952 business and family responsibilities will be of little use in a future war, even if the reserve programs of the Air Force and Navy trained them properly—which he doesn't think they do.

So, says the gentleman from California, something must be done to provide a new reserve of trained pilots, navigators, bombardiers, engineers, etc. He offers two alternatives: one, take applicants with two years of college and put them into the Military or Naval Academy as air trainees, to serve only two years in the academies instead of four. This would double the output of the service academies. The other alternative is to take men who have completed a full college course and send them through a "quickie" specialized air training course.

Hinshaw mildly criticized the Air Force and Navy for failure to draft legislation of a remedy for the reserve dissipation. He said that he and others in Congress are going ahead with plans for such legislation without military assistance. He is sincerely interested in obtaining views and suggestions that might help in preparing such legislation.

Speed Records

Pan American Airways' Stratocruiser, the Clipper America, set a new non-stop speed record of 9 hrs. 46 min. on a proving flight between New York and London on April 28, shaving 16 minutes off previous record set by a PAA Constellation last Jan. 18. Aided by a 110 mph tailwind, the Stratocruiser had an average ground speed of 365 mph.

National Airlines claimed a new speed record for scheduled DC-6 flights between Miami and Havana with a flight of 43 minutes. Scheduled time is 58 minutes. Previous record, set by a NAL DC-6 last Mar. 9, was 44 min. 41 sec.

Production Spotlight

U. S.-Canadian Agreements: Under a new U. S.-Canadian agreement, a second Air Force plane will be built in Canada. Last week **Northrop Aircraft** announced the signing of a contract with **Canadair, Ltd.**, of Montreal, whereby Canadair will build the three-engine Northrop C-125 Raider, an assault transport designed for operation in and out of small, unimproved fields and landing strips.

Previously, **North American Aviation** had arranged with the Canadian government for production of the F-86 jet fighter in Canada. It is believed that Canadair will also build the F-86. Canada is now negotiating for production rights to two other USAF planes: **Fairchild's C-119,** troop-carrying transport, and the **Boeing C-97** Stratofreighter, heavy transport.

Cancellation Effects: *The effects of the Air Force's cancellation of Boeing's B-54 production contract are still being felt. The cancellation left a production gap in Boeing's Seattle plant, and rather than reduce the work force, the company looked around for new work. First the company cut back a portion of a subcontract it had let to Bell Aircraft Corp. for production of B-47 jet nacelles. Bell will continue to build the inboard nacelles or "pods", which have two engines each, but Boeing will build the outboard single-engine pods at Seattle. Next, Boeing turned to its own Wichita Division, and recalled some B-50, C-97 and Stratocruiser component work. There will probably be more work switched to Seattle. Since Boeing has probably let more subcontracts than any other manufacturer, the work will not be hard to find. But each switch costs money, and the B-54 will probably be the most expensive contract cancellation of all time.*

Fairchild Strife: Fairchild Engine and Airplane Corp. is locked in internal strife. Sherman Fairchild, founder of the company and former chairman of the board, incensed at the board's action in awarding retirement benefits of $25,000 a year to J. Carlton Ward, Jr., present board chairman, managed to block a quorum at the scheduled annual meeting by requesting stockholders to withhold or revoke their proxies. Fairchild wants to elect a new slate of directors to reverse the decision.

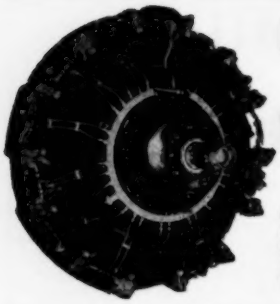
Company president L. B. Richardson then countered wtih a sharply-worded letter to stockholders. Fairchild's ire at the retirement award is just a blind, he said, to cover Fairchild's real purpose—to regain control of the company. Pointing out that Fairchild's only two unprofitable years were during the period when the founder was running the company, and that the company has been very successful under Ward's management, Richardson asked stockholders to ignore Fairchild and send in their proxies so the annual meeting may be held.

Fairchild fired another round. The management, he said, had concealed "losses in the millions" from the stockholders in the corporation's Duramold and Personal Planes Division. He said the management is giving the stockholders a "false sense of corporate prosperity" and urged continued proxy withholding to force another adjournment of the annual meeting. The "Battle of the Quorum" is still in progress.

More DC-6 Production: *Douglas Aircraft has revived its DC-6 production line with re-orders from Philippine Air Lines (its 5th DC-6) Panagra (its 6th) and Delta Air Lines (6th). Another unit on the production line is the prototype DC-6A cargo version. Douglas has also authorized the purchase of materials for 10 additional DC-6's...The company has prepared a transport aircraft exhibit illustrating the carrying capabilities of each of eight types of planes: Douglas C-124, C-74, C-54, C-47 and Super C-47, DC-6A, and the Boeing C-97 and Lockheed C-121. Exhibit consists of transparent fuselage models with scale models of transportable equipment which can be fitted into the fuselages.*

Industry Briefs: **Republic Aviation Corp.'s** F-84E, latest model of the Thunderjet, will differ from earlier models. It will have more power and a longer fuselage...The Air Force has canceled **Boeing's XB-55,** which would have been a high-speed turbo-jet medium bomber ...**Fairchild** has delivered the first model of the C-119 troop-carrying transport, successor to the C-82 Packet, to the Air Force...**Final military airframe procurement** for the fiscal year 1949 will total about 42,500,000 lbs.: Air Force, slightly less than 32,000,000 lbs, Navy, 10,613,000 lbs., The **Martin Viking,** Navy guided missile, has been successfully test-fired.

—J. J. H.



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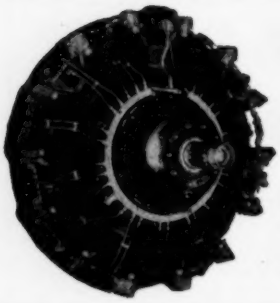

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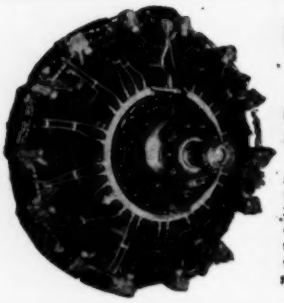

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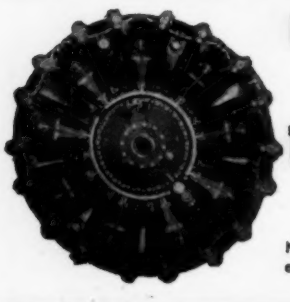

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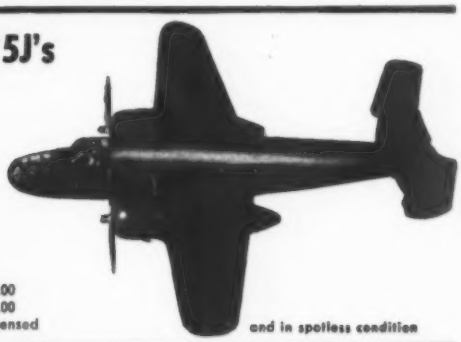

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ADMINISTRATIVE

Junius H. Cooper, former vice president-treasurer of Chicago & Southern Air Lines, has been elected vice president-finance, and the post of treasurer has been given to **Thomas F. Hambleton,** formerly assistant treasurer. Cooper continues as chief fiscal officer of the company.

Noah Dietrich, executive vice president of the Hughes Tool Co., who resigned from the board of directors of TWA last January, was again elected to the board at the annual stockholders' meeting, replacing **Thomas Pew,** who retired.

Dallas B. Sherman, formerly system operations representative for Pan American Airways based in Washington, has been appointed as special executive representative to the Orient, with headquarters in Tokyo.

Gene Loofbourrow has taken over administration of TWA's overseas wage and salary program, with headquarters in Paris. He had been at the home offices in Kansas City.

M. F. Garrison has been promoted from manager of cost accounting to assistant to the controller of TWA. He was with Boeing Aircraft before joining TWA in 1945.

D. E. Tait has been appointed to the new position of materials manager for American Airlines at Tulsa. His former post as supervisor of purchasing at Tulsa was taken over by **Hugh B. Gemmill.**

Paul M. Godehn, whose law firm, Mayer, Meyer, Austrian and Platt, is general counsel for United Air Lines, has been presented with a pin signifying 15 years of service as a director of the airline.

OPERATIONS-MAINTENANCE

George McCullough, former supervisor of ground instruction at American Airlines Training Center, has been appointed assistant to operations manager **W. H. Miller** at New York, succeeding **E. J. Milano,** who resigned to enter the real estate business.

John F. Davidson, who served until recently as director of operations for the Air Transport Association, has gone with National Airlines as division operations manager at Jacksonville.

Paul E. Miller, formerly chief radio operator for Northwest Airlines at Miles City, Mont., is now station manager at Bozeman, Mont., succeeding **G. E. Eaton,** resigned.

Clyde S. Fullerton
TWA General Sales Manager

R. E. Camors, former Delta Air Lines station manager in Fort Worth, has been transferred to Dallas in the same capacity, succeeding **W. F. Gillespie,** resigned. **Clarence N. Corbin,** chief agent at Dallas, was promoted to station manager.

John E. Kohler, formerly United Air Lines station manager at Chicago, has been transferred to Boston in the same capacity, replacing **Merle I. Gallagher,** transferred to Cleveland as chief of ground services. Gallagher is a 17-year veteran with United, Kohler a 12-year man.

D. H. Robertson, who has been a special assistant in the ground service department at UAL's Denver operating base, has been named acting station manager at Reno, succeeding **William M. Tenner,** who resigned to enter private business in San Francisco.

Rudy M. Lund, PAA station manager at Ciudad Trujillo since 1945, will become station manager at Miami June 1, succeeding **Frank Martin,** resigned. Lund joined PAA in 1933. **Guy A. Luttrell,** who has been station manager at Houston, has taken over Lund's old post, and the Houston job goes to **John N. White,** formerly assistant manager at Balboa, C. Z.

TRAFFIC & SALES

Clyde S. Fullerton has been promoted from general sales manager—domestic to system general sales manager for TWA. **John H. Clemson** continues to serve as system general traffic manager. Fullerton has been with TWA for 19 years.

Mel Anderson, formerly with Slick Airways and before that with Braniff, has been appointed agency, interline and cargo manager for Trans-Texas Airways.

W. W. Wehner, formerly assistant district traffic and sales manager for United Air Lines at San Francisco, has been appointed city traffic and sales manager at Long Beach, succeeding **J. B. Miller,** recently transferred to Sacramento. **R. W. Goodspeed,** formerly superintendent of interline sales at Chicago, has replaced Wehner at SF.

Robert H. Ames, former Capital Airlines advertising manager and more recently with Kiplinger Magazine, has joined the Washington advertising agency of Lewis Edwin Ryan.

John Woodruff has been promoted from assistant system traffic manager for Colonial Airlines to system sales manager, replacing **A. C. Doyle,** resigned. Woodruff has been with Colonial since 1940.

William J. Madden, formerly associated with Peruvian International Airways in New York, has been appointed cargo sales representative for KLM Royal Dutch Airlines.

Jerry Newmark, director of sales for American Overseas Airlines in Bavaria, will be in charge of the new AOA ticket office soon to be opened in Munich.

Others in the News

J. F. McCarthy, vice president and treasurer of Wright Aeronautical Corp., has been elected to fill the vacancy on the board of directors left by the resignation of **W. C. Jordan.**

L. O. Head, president and director of the Railway Express Agency since 1932, retired after more than 50 years of continuous service in the express field. **Alfred L. Hammell,** executive vice president, was elected as his successor in both positions.

Frank A. O'Neill, Jr., has succeeded **Frank P. Douglass** under a rotation system as chairman of the National Mediation Board. Judge Douglass remains a member of the Board.

Alfred Wagstaff III has gone to Bermuda as resident manager for Colonial Airlines, replacing **James J. Kelly, Jr.,** who has returned to the company's New York offices.

Irwin C. Nye, for the past three years public relations representative for the Airborne Instruments Laboratory, has joined the public relations staff of American Airlines in New York.

William C. Wold, who resigned recently as New York manager of Consolidated Vultee Aircraft Corp., has opened offices at 500 Fifth Ave., New York, engaging in representation, sales promotion and special projects under the name of William C. Wold Associates. He will provide N. Y. sales representation for Convair on a contract basis.

Paul V. Shields

Shields Heads C-W As Jordan Resigns

The reorganization of the Curtiss-Wright Corp.'s executive management which began last December, following the resignation of Guy W. Vaughan as president, resulted in the emergence three weeks ago of Paul V. Shields as the company's chief executive.

Shields' new position bears the unusual title of "chairman as chief executive officer." He is not chairman of the board of directors, a position which had not been filled at this writing. His election followed the resignation of William C. Jordan as president of both Curtiss-Wright Corp. and Wright Aeronautical Corp. Jordan had been president since Vaughan's resignation.

Robert L. Earle, general manager of C-W's Propeller Division, was appointed general manager of Wright Aeronautical, replacing Jordan. He also will continue to run the Propeller Division. Yet to be named was a president to coordinate the manufacturing operations of the several Curtiss-Wright divisions.

Dryden Gives Wright Lecture

Dr. Hugh Dryden, director of aeronautical research for the National Advisory Committee for Aeronautics, delivered the annual Wilbur Wright Lecture before the Royal Aeronautical Society in London on April 28. His topic: "The Aeronautical Research Scene." While overseas, Dr. Dryden also was to visit aircraft wind tunnel establishments in Amsterdam and in southern France.

Dryden

Airline Commentary

By ERIC BRAMLEY

AT MANY airports in the country there are machines out of which come airline trip insurance policies. They're a tremendous convenience—up to a certain point. You deposit a quarter or more, do a little writing, push a button, and out comes your policy. Next step is to get an envelope out of a slot. Address it to the beneficiary, seal it—and then, sometimes, you're stuck. No stamp. Maybe, after making an inquiry, you can find the place to buy a stamp. But why wouldn't it be a good idea either to (1) hang a stamp machine alongside the insurance machine (revenue for the airport), or (2) attach a sign to the machine telling the purchaser where he can buy a stamp. Most passengers, we believe, probably use the machine during the period between check-in and departure, and time may too short for them to make many inquiries about buying stamps. Why not help them out?

•

There have been poems galore about pilots, co-pilots, and stewardesses, and there have been ditties written by crew members on flight reports. However, seldom have we seen one about the poor old airport manager. Now comes "Tribute to the Airport Man," which we think worthy of publication. It was written by Frank Fox, manager of the municipal airport at Worcester, Mass., and went over big at the recent annual convention of the American Association of Airport Executives at Oklahoma City. Here 'tis:

He cuts the grass, he plows the snow,
He makes the airline schedules go,
But someone else makes all the dough,
Not the Airport Man.

He fights a bit with CAA,
And tries to make concessions pay,
He works a twenty-hour day,
The Airport Man.

He doesn't drink and doesn't smoke,
And never tells a dirty joke,
And damn near all the time is broke,
The Airport Man.

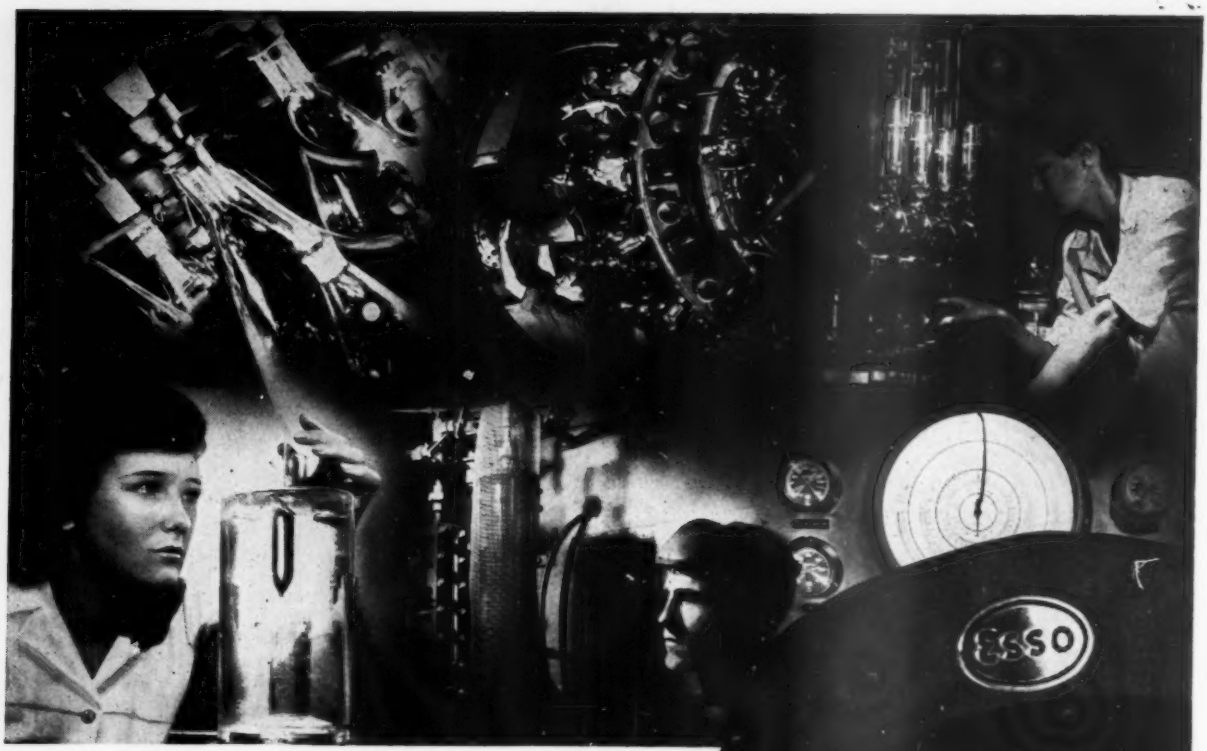
He's overworked, he's underpaid,
Of man nor beast he's not afraid
But spare him from that Federal Aid,
The Airport Man.

This flying game he tries to sell
And at his work he labors well,
But in the end he catches hell,
The Airport Man.

There's not much I can say for him,
I only ask you pray for him,
And cities start to pay for him,
The Airport Man.

•

Sitting around chewing the fat the other evening with a bunch of guys, the subject of air coach service came up, and remarks were made about how well it was being patronized. A friend of ours, who works at a certain airport, spoke up. He said: "You know, some of the airlines say that they operate air coaches so that they can get some revenue out of their planes at times when they'd otherwise be sitting on the ground. A couple of years ago I had an idea that our airport could maybe help out some airline that wanted to get into the air coach business, and at the same time maybe bring in some more revenue for the airport. We're something like the airlines—they have planes sitting on the ground during the night; we have an airport that doesn't produce nearly as much revenue during the night as in the day. My idea was to reduce the landing charges between midnight and eight o'clock in the morning. This would have helped out air coach operators and we might have gotten some more schedules in the slack period. Couldn't sell the idea to the management, though." This sounded to us like a darned interesting idea. Anyone care to submit the arguments against it?



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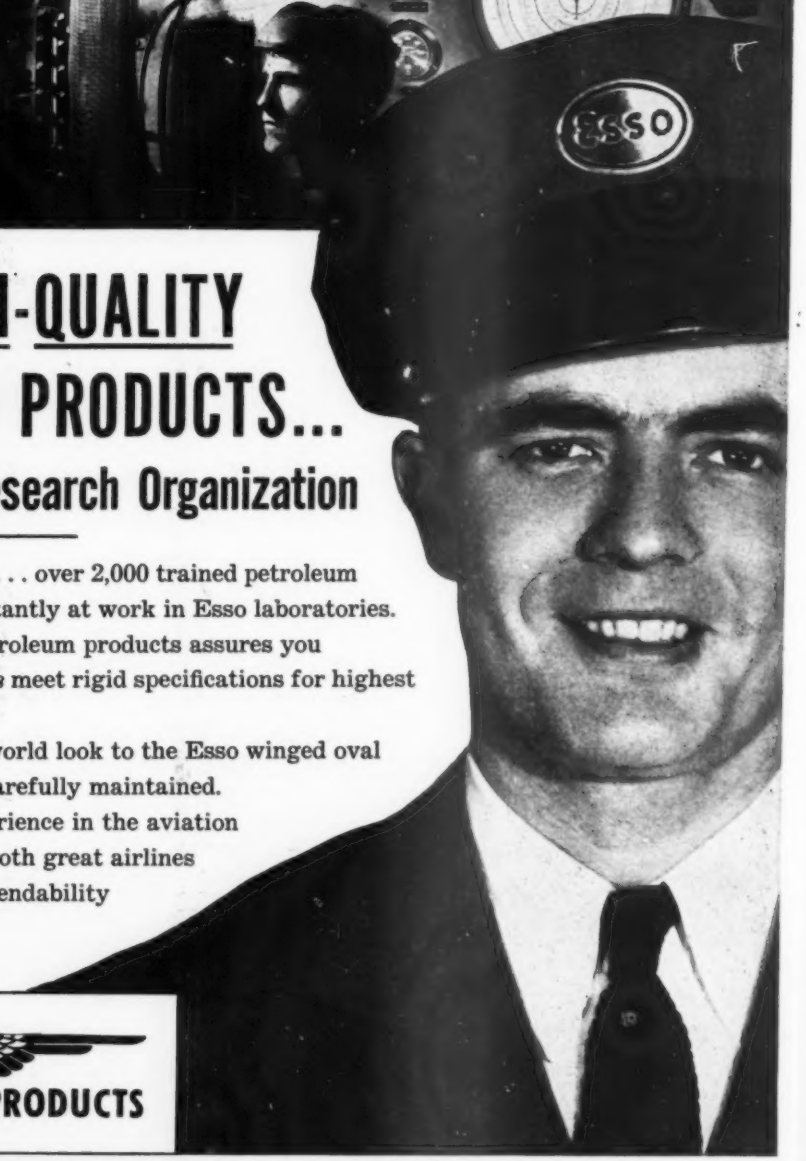


ESSO EXPORT CORPORATION, AVIATION DEPARTMENT, 25 BROAD STREET, NEW YORK 4, N. Y.

Oxygen Converters Offer Advantages for Airline Use

By WILLIAM D. PERREAULT

CAB's engineering staff is now working on a final draft of Civil Air Regulations that will impose more stringent oxygen requirements on airline operators. The regulations include the designation of altitudes and time elements when the operating crew and passengers will be required to use oxygen, arrangement of the supply, types of masks to be used, and minimum flow rates.

This represents the culmination of many months' activities among the airlines, ATA, CAB and CAA in attempting to determine the proper scope of the regulations.

It was generally conceded that existing regulations were not adequate, but the airlines were reluctant to accept the arbitrary regulations which had been proposed and which in many cases would have provided a sizeable and unwarranted modification of the aircraft with resultant costs. The regulations would also have brought continuing responsibilities.

Now the die is cast. The regulation, as it will appear in the next few weeks, will call for the provision of additional oxygen in many of the airlines' aircraft. Many of the objectionable portions of the regulations will have been modified but some will remain on the record. This may well be the time for airlines to consider the use of oxygen converters such as the military services have adopted in recent months. These would provide greater oxygen supplies without a sacrifice in weight or space.

The National Bureau of Standards has been doing experimental work in the design of an oxygen converter suitable for aircraft use for many years. Results have now been obtained and at least one company, Bendix, has manufactured a number of converters from the NBS specifications. This work was recently described in a paper presented before the Institute of the Aeronautical Sciences by the designer, W. A. Wildhack, and D. S. Goalwin, both of the NBS.

Present Practice. In military and commercial operations it has been common to supply breathing oxygen to the crew and passengers from special supply tanks filled with gaseous oxygen under pressure. In the military applications this oxygen was generally stored under 300 psi pressure, while in commercial operations, to minimize weight and conserve space, 1800 psi pressure was used. Special regulating equipment reduced the supply pressure to 40-50 psi as required by other system components.

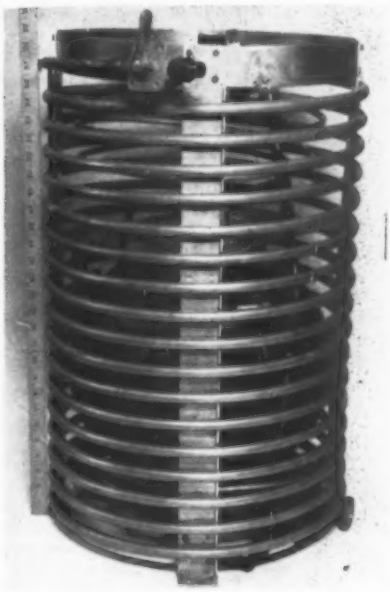
This system, while not wholly satisfactory, has been the best available. The oxygen converter promises to change this. The converter is a self-powered system for the storage of liquid oxygen and the conversion of this liquid to gaseous oxygen as demanded by operating conditions. Liquid oxygen has many advantages over gaseous oxygen, particularly in aircraft applications.

Weight and Volume. An oxygen converter weighing 60 pounds will hold 62 pounds of oxygen. In normal airline oxygen systems, a 2360 cubic inch container (weighing 122 pounds) is used to store 19 pounds of oxygen under 2000 pounds of pressure. At this same pressure, it would require 21 tanks of 514 cubic inch capacity each to equal the converter's 62 pound capacity and total empty weight would be 350 pounds.

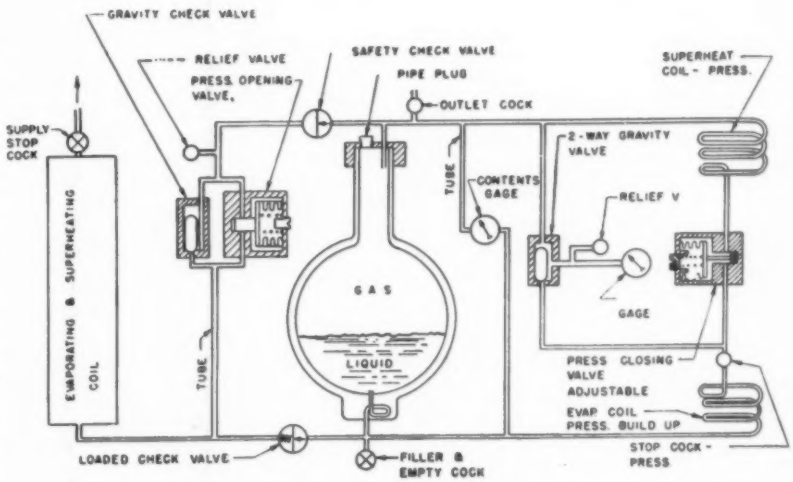
Liquid oxygen is easier to handle. It does not require shipment and storage under pressure, tanks are easier to refill and safer to handle. The advantages of liquid oxygen are many, but until recently adequate equipment for the storage, transfer and transport of the liquid gas was not generally available.

Converter Details. The heart of the NBS oxygen converter is a Dewar flask of 25 liter capacity. It is made of .050 copper and provided with a manifold at the neck opening and a drain and liquid trap at the base. When liquid oxygen is stored in this cylinder (about 90% full), there is some tendency for the oxygen to vaporize, forming low pressure in the flask.

The plumbing associated with the flask (see schematic drawing) permits liquid



Compact Converter— This is the complete oxygen converter. It measures 25 inches in height and 18 inches in diameter. Although it weighs only 60 pounds, it is capable of handling 62 pounds of oxygen. Normal high pressure cylinders such as used in most aircraft would require 21 tanks of 514 cubic inch capacity to handle the same weight of gaseous oxygen.



Schematic Sketch— This drawing shows the operational arrangement of the oxygen converter system. One of the prime advantages is that the system is entirely independent of outside power. The cycle is self-generating. The coil at the left in this drawing is also known as the distributing coil while that at the right is referred to as a pressure build-up coil. These terms are more descriptive of the system's operation than the alternate terms shown.

oxygen to flow out of the base and into a pressure build-up coil. This is a 40-foot section of ⅜" dural tubing. A globe type valve in this section of plumbing serves to control system operation.

Heat of the atmosphere causes the liquid in the coil to evaporate. In evaporating, the gaseous oxygen moves through the plumbing to the top of the flask applying pressure to the liquid. The only purpose of this circuit is to move the fluid oxygen into the evaporating and superheating coil at predetermined rates. This second coil is an 80-foot section of ⅝" O. D. dural tubing wrapped around the flask to form the outer housing of the converter.

As the liquid oxygen passes through this coil it is heated and evaporated by surrounding air so that delivered oxygen is within 5 degrees C. of ambient air temperatures. The outlet of this coil is connected to the aircraft's oxygen distributing system.

Limiting Controls. The pressure generating circuit is very effective. It is slightly more efficient when the supply flask is relatively full, at which time a pressure of 65 psi is available in 10 seconds from the time the globe valve is opened. Even when the container is only one-fourth full, the time lag amounts to less than 15 minutes.

The system is capable of generating pressures as high as 1100 pounds but this is controlled in several ways. The first method is by means of a bellows type pressure relief valve in the plumbing of the pressure build up circuit. This valve can be set to between 40-70 psi and at this value it will close off the line to the top of the flask and interrupt the cycle until the differential drops again.

The second control is the pressure opening valve connected between the neck of the flask and the distributing coil, as the evaporation and superheating coil is more generally called. If pressure in the top of the flask reaches an abnormal level, this valve opens and connects the build-up pressure directly to the distribution coil. In addition to directly reducing line pressure, this minimizes the effectiveness of the operating cycle during such periods.

The system as described will operate in an upright position as much as 45 degrees to either side of center; however, additional plumbing is required to insure operation if the aircraft is inverted. This is accomplished by the two gravity operated check valves that ioslate the system in normal use and enable operation when the unit is upside-down. Although the routing is different at such times, the operation is identical. The schematic drawing will serve to illustrate that the relief valves and pressure gage are always in the operating circuit.

In various tests the converter has been subjected to vibration of varying amplitude and frequency, altitudes as high as 40,000 feet and to temperatures from —55 degrees C. to +75 degrees C. without seriously affecting converter output.

Center of Attraction—The major component in the oxygen converter is a Dewar 25 liter flask which is used as the liquid reservoir. To keep the converter dimensions at a minimum, the build up of coil is wrapped around the flask. The associated valves and gages are installed and the distribution coil wrapped so as to form the outer housing of the assembly.

A differential bellows manometer type gage is used to indicate flask content through measuring differential pressure head. Except during the filling operation, when the gage always reads full, it is an adequate gaging system. Other system components include a safety valve in the flask, a manual vent and a quick disconnect fitting for draining the system.

In summary, under the guidance of W. A. Wildhack, and in cooperation with the Navy Bureau of Aeronautics, the National Bureau of Standards has designed and built oxygen converters suitable for use in aircraft. These converters have since been manufactured by Bendix for the military services. They are compact, lightweight units with a capacity of about 100 man hours of oxygen.

Many features of the converters make them desirable for use in aircraft.

Control Tower Cleared In Seattle Accident

In a final report on the crash of the Seattle Air Charter DC-3 in Seattle, Wash., on Jan. 2, the Civil Aeronautics Board has cleared the control tower operators of any responsibility. At the time of the crash, in which a number of Yale students returning from holiday vacations were killed, there was considerable speculation over the part played by the tower operator in permitting the aircraft to be dispatched.

Final analysis of operator duties disclosed that the operator was responsible only for providing traffic clearance and weather data as requested. It was the captain's position to make the final determination as to the airworthiness of the equipment.

CAB cited the patches of ice and frost on the top surface of the left wing and the ice covered bottom surfaces of both wings as the probable cause of the accident in which the aircraft failed to complete its take-off, dragged the left wing on the ground, and finally struck a revetment hangar and was consumed by fire. Although the aircraft was overloaded by 1501 pounds this was not cited as a contributing factor in the accident.

Pilots Held Safer Risks

Insurance companies no longer look upon airline pilots as poor risks. Of 100 companies surveyed by the Institute of Life Insurance, 93 now grant life insurance to applicants who are pilots and crews on scheduled airlines in the U. S., 74 will insure pilots and crews on Western Hemisphere flights, and 52 insure applicants serving on world-wide flights.

Domestically, 80 of the 100 companies grant insurance to pilots and crews on non-scheduled commercial flights. On both scheduled and non-scheduled domestic carriers, only six companies make outright rejections of applicants for insurance or issue policies with the air risk excluded, the balance of the companies giving individual consideration to each application.

Some limitations still apply to the writing of policies on airline pilots and crew members, however, the most common ones being an extra charge (usually $3) per $1,000 of insurance issued, and a limit (usually $25,000) on the amount of insurance issued.

New CAA Safety Director

E. S. Hensley, who has been with CAA and predecessor organizations since 1937, has been appointed director of CAA's Office of Aviation Safety, succeeding Joseph Marriott. Since 1946, Hensley has been deputy assistant administrator in this section under A. Koch and Marriott.

SAFETY SLANTS

THE USAF SCHOOL of Aviation Medicine has developed a simple device which detects lack of oxygen in the pilot's body by measuring the characteristic electrical pulsations known as brainwaves. When there is insufficient

oxygen for normal bodily functions, the characteristics of the brainwaves change and the new equipment detects this condition. As shown in the photo, the equipment includes the headpiece worn by the pilot and a signal light on the instrument panel. The circuit is completed by a jack type connection into the ships electrical system. At 25,000 feet altitude, the EEG unit warns of oxygen starvation in about 100 seconds or several minutes before the crew would be in a critical condition.

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TWA's recent experience with inoperative life rafts on the Constellation underline the need for constant checking of this vital equipment. The rafts failed to inflate during normal ground checking due to ice formation in the conduit from the bottles to the raft. The partially inflated rafts failed to fully open the cover doors. TWA is considering moving the rafts from the wing into the fuselage proper. Some airlines are having the single bottle life rafts converted into dual bottle installations to minimize the dangers inherent with an inoperative bottle. Although there is a "standard" established as to life raft contents there are notable differences in the content carried by the individual lines.

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For the fifth consecutive year Pan American-Grace Airways has been awarded the Aviation Award by the Inter-American Safety Council. Panagra flew 110,838,000 passenger miles and 6,074,000 flight miles during 1948, bringing the accumulated record to 465,653,951 passenger miles and 30,649,475 flight miles without a single accident or fatality to passengers or crew while operating 9,896 route miles in Latin America.

•

American Airlines has completed three years operation without a fatal accident, during this period carrying 8,000,000 passengers 4,154,637,-050 passenger miles.

$1,500 inventory abolished— at a cost of $4.46!

With more than 700 vacuum tubes needed by industry, a tube distributor would find profits consumed by 100% inventories. But by ordering tubes as needed via Air Express, he holds stocks to 25%. Example: Orders $1,500 tube at 9 A.M. from supplier 900 miles away. Delivered to customer 6 P.M. same day. 16 lbs.: cost, $4.46.

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Positive Check—This is the simple test unit used by Pan American Airways at the Miami overhaul base to determine life raft condition. During the periodic overhauls, after the raft has been inspected for physical condition, it is inflated and the manometer connected into one of the air valves. Any leakage is easy to detect by variations in the mercury level over the period of the test. In this photo the unit is connected to a dual tube, 20-man life raft.

BOAC Completes Purchase Of Four Stratocruisers

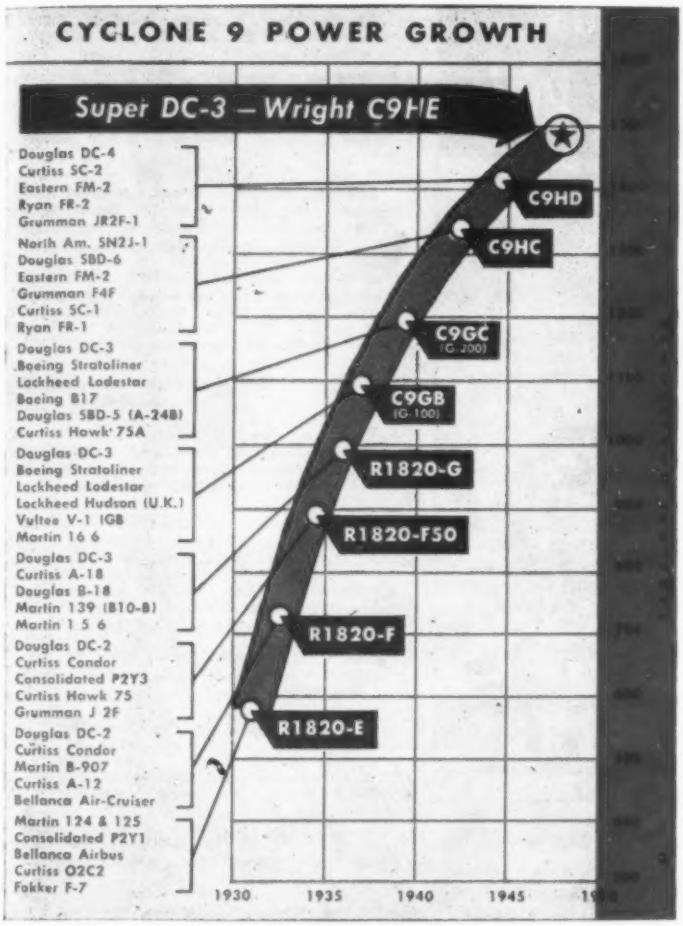
British Overseas Airways Corp. has completed the purchase deal in sterling for the four Boeing Stratocruisers which have been on order by Scandinavian Airlines System. Purchase price, including spares, was $12,000,000 and BOAC stated that "of this, only a small portion for replaceable parts will be paid for by BOAC in dollars."

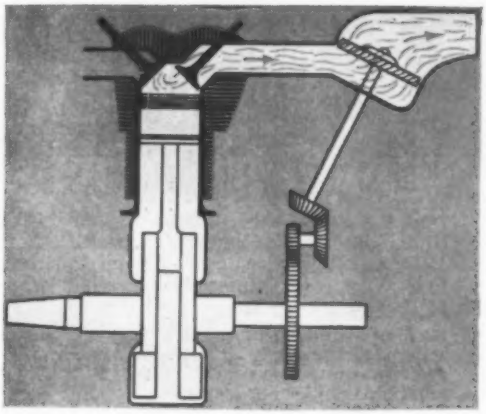
The deal increases BOAC's Boeing fleet from six to 10, with first delivery scheduled toward the end of summer. SAS will concentrate on DC-6's for over-ocean operations.

UAL's Improved Maintenance

Completing the first year of operation of its San Francisco maintenance base, United Air Lines has announced major improvements in production, economy and safety.

While boosting overhaul rates from 40 engines per month last year to 93.5 this year, aircraft overhauls from 10 per month to 18.4 and electronic and instrument repair from 32,000 items per year to 102,000, United has also reduced man hour losses due to accidents to one hour and 12 minutes for every 1,000 man hours as compared to an industry average of two days per 1,000 man hours.





Still Going Up—With the introduction of the Wright Cyclone 9HE engine, for use in the Super DC-3, power output of this famous 9-cylinder powerplant has been raised to 1475 for take-off with 100 octane fuel and 1525 hp with either 130 octane fuel or water injection. The graph on left provides an interesting account of the evolution from the 575 horsepower engine of 1933 through the present model. The Cyclone 9HE weighs .91 pounds per brake horsepower.

Not shown here, nor officially announced as yet, is a compounded version of the famous 1820 cubic inch displacement engine. This model is in the final stages of development and will probably see its first commercial service in a revitalized version of the DC-4 known as the Super DC-4.

The schematic drawing above shows the workings of a Wright compound engine in which three blow down turbines are used to harness exhaust gas energy which is then geared directly into the crankshaft and impeller through a hydraulic coupling.

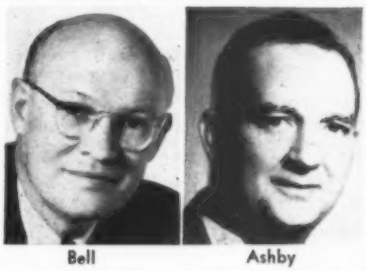
Among the Suppliers

CHAMPION Spark Plug Co. will hold its annual spark plug and ignition conference on Sept. 6-8 at the Hotel Secor, Toledo, Ohio. This meeting has proved its value to the industry in the past and now takes on an international light with considerable number of foreign airlines joining with domestic airlines and associated manufacturers in discussing present day problems and developments.

The Esso-Atlas Sky Merchant left LaGuardia Field on May 7 with a group of 10 American business men and a crew of five. The Sky Merchant, a Douglas DC-4 will visit 19 cities in 14 countries of Europe and North Africa before returning from its 13,435 mile trip on June 30. The purpose of the flight is to discuss, and possibly negotiate, arrangements with European manufacturers to produce Atlas tires, batteries and other accessory products locally and arrange local marketing facilities for these products.

Eclipse-Pioneer Division of Bendix Aviation Corp., Teterboro, N. J., has recently developed a technique of plaster mold casting capable of mass production and turning out complex inner construction. The process can be applied to all non-ferrous metals. . . **Airborne Instruments Laboratory,** 160 Old Country Road, Mineola, New York, has set up a new division designated as the Applied Physics Section. Heading the new section is **Rodney F. Simons.** It is the first section initiated since early 1947 and will handle research in counting and recording instruments, "tailored" vacuum tubes, etc. The section employs three people but is expected to double its personnel in the near future.

Surface Combustion Corp. has announced the appointment of **Robin A. Bell,** former sales manager of the Janitrol Aircraft-Automotive division, to general sales manager of the entire Janitrol



Bell Ashby

division. **James W. Ashby,** a veteran of 13 years with Surface Combustion, was appointed to the vacancy left by Bell's advancement. . . **Dayton Aircraft Products, Inc.,** has been accepted for membership in the Assembly of the Radio Technical Commission for Aeronautics, an organization dedicated to the advancement of the art and science of aeronautics through the investigation of available or potential applications of telecommunications art. **George W. Houk,** president of DAP, has been appointed senior delegate and Robert Patterson, vice president and treasurer, as alternate.

Tom Laughan, field service engineer with **Wm. R. Whittaker Co.,** Los Angeles, Calif., has returned from Alaska where he has been studying Arctic conditions as applied to operation of engine fuel and oil systems. The tour included visits at Ladd Field where the Air Force maintains a cold weather test station and to Barter Island on the Arctic Ocean.

Albert F. Korf has been appointed sales manager of the **L.G.S. Spring Clutch Corp.,** Indianapolis, Ind., a division of the Curtiss-Wright Corp. Korf was formerly with Allis-Chalmers for 19 years.

Sperry Corp. has announced the resignations of **A. R. Welton,** president, and **D. W. Powers,** general manager, of the Wright Machinery Co. of Durham, N. C. Welton will resume other duties as v. p. of Sperry Corp. **John B. Wilson** has been named president and general manager of Wright Machinery.

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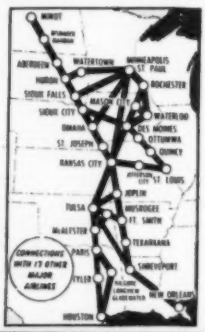

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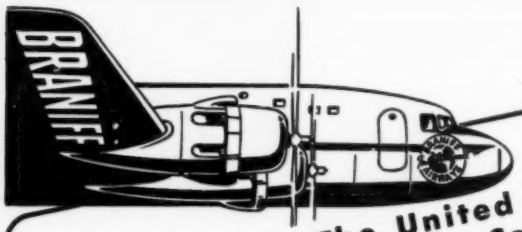

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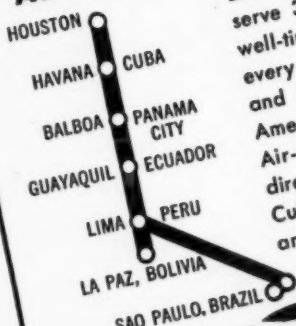

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——TECHNICAL LITERATURE——

Arc Welding: Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y., is circulating monthly bulletin titled "The Eutectic Welder." The bulletin is devoted to discussions of the applications of Eutectic products for arc welding. It provides a complete, easy to understand source of information for arc welding steel and similar data.

Selective Hardener: Denfis Chemical Laboratories, Inc., 172 Pacific St., Brooklyn 2, N. Y., has released a bulletin describing Carburit and Isopac pack-hardening and isolating pastes. Carburit is used for selective hardening problems and requires no special equipment while Isopac is an easy-to-use isolating paste that keeps desired sections soft when hardening in box, salt bath or by other conventional method.

Navigation Catalog: Pan-American Navigation Service, 12021 Ventura Blvd., N. Hollywood, Calif., has published a special catalog covering weather instruments, chronometers, navigation equipment, binoculars, sextants, projectors, scopes, etc. Catalog M-9 is available on request to PANS.

'Surface' Burners: Surface Combustion Corp., Toledo 1, Ohio, has published a two-color bulletin showing application of "Surface" burners to typical immersion heating installations. Both suction and atmospheric type burners are covered by the 4-page bulletin which discusses various processes to which they are applicable. Useful data includes tables showing heat requirements for water in open tanks, both dip and spray types.

Cleaning Compounds: Cee Bee Chemical Co., Inc., Aviation Division, 655 East Gage Ave., Los Angeles 1, Calif., has released a four-page pamphlet describing various aircraft cleaning compounds including A-5 heavy duty brightener, A-3, Alumaloy A. and A-37. The latter is a brush-on carbon remover for removing heavy exhaust deposits. Also described is a special propeller de-icer boot remover.

Hobart Welders: Hobart Brothers Co., Hobart Square, Troy, Ohio, has released an 8-page catalog with illustrations, descriptions, dimensions and specifications on its complete line of "Simplified" arc welders. The catalog describes the many types of electric motor driven, gasoline engine driven and transformer type welders in a wide variety of sizes. Also described is a high frequency stabilizer attachment.

Bellows Equipment: The Bellows Co., 222 West Market St., Akron, Ohio, has released a bulletin describing the use of Controlled-Air-Power devices. The 12-page booklet, bulletin CL-15, describes the application of Bellows equipment to standard machines to provide automatic operation and in so doing increase productivity while reducing operating costs. The company indicates that this operation can be provided on vises, drill presses, lathes, cut-off saws, tube flaring, tube bending, and operating paint sprayers.

Thermocouple Wire: The Instrument Society of America, 1117 Wolfendale St., Pittsburgh 12, Pa., has published "Tentative Recommended Practices Covering Coding of Thermocouple Wire and Extension Wire." The 4-page standard, printed on 8½x11-inch paper, covers thermocouple combinations and extension wire, including iron-constantan, types J and Y; chromel-alumel; platinum — 10% rhodium-platinum — 13% rhodium-platinum; copper-constantan. Free to members, $1 to non-members.

The ISA also published recommended practice RP2.1 covering manometer tables. This 32-page recommendation on 8½x11-inch paper includes data for facilitating and standardizing the use of manometers and U-tubes. Free to members, $2 for non-members.

Extra Section

By William D. Perreault

IN THE current issue of the *Air Line Pilot*, official organ of the Air Line Pilots Association, the problem of technological unemployment among airline pilots is discussed. Referring to the recent record flight of the Air Force's B-47 jet bomber, the paper indicates that speeds of a much lower scale such as evidenced by American Airlines' fleet of DC-6's and Convair Liners is already producing problems. According to ALPA, American's pilot personnel have been reduced in number from 1,265 to 753 as a result of the larger, faster and more productive equipment. ALPA concludes, "Out of necessity, the air line pilots will soon project a realistic plan to meet this situation which will inevitably become industry-wide."

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Trans-Canada Air Lines states that flight irregularity cost TCA $264,017 in cash during 1948, plus the inevitable loss in passenger good will. This was the direct cost of providing passengers inconvenienced by interrupted flights with taxi, hotel and meal expenses. TCA also reminded its personnel, through the pages of its company publication, "Between Ourselves," that the telephone, telegraph and teletype services for the same period cost $639,472. The accompanying advice to "THINK TWICE" is in order for all airline employees.

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Twenty safety counselors from major points on United Air Lines' system spent a three-day session at UAL's Denver base, where they reviewed the relation of safety to the many branches of airline operation. Among the attractions at the conference were a special safety exhibit prepared by J. C. Curtis, superintendent of ground safety, and a special visit to Lowry Field, where the group witnessed first aid and safety demonstrations.

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On several occasions in the past, malfunctioning of the propeller reversing circuits has caused airplanes to leave the runway during landing operations. In these instances, the props on one side of the aircraft reversed normally, while those on the other side failed to do so. The possible results of this type malfunctioning during landings at an airport during FIDO operations is worthy of consideration.

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American Airlines has been awarded a "safety oscar" by the National Safety Council for producing the occupational film, "This Way Out," judged to be the best in this class for the year 1948. The movie, which deals with methods of evacuating the DC-6 airplane, was filmed by Agnew Davis of public relations and produced by Sam Davis, supervisor of safety education. "This Way Out" aroused considerable interest at the recent meeting of the Society of Automotive Engineers when Otto Kirchner, director of engineering for AA, included it as part of his presentation on this same subject.

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The matter of the Boeing 377 being tipped rearward so that it rested on the tailskid during recent pre-schedule operations is not a true design problem. With the P&W 4360 engines capable of 3500 h. p. each, and reversing props to limit the landing run, adequate ground procedures are a "must". Boeing has advised the airlines against using more than 1800 h. p. in reverse pitch during such operations and states that this will prevent such occurrences

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Ralph Geror's paper covering "on condition" maintenance was well received at the SAE meeting in New York. Although most of the airline representatives are familiar with his work in this direction, much of the information was new to the manufacturing and other industry interests at the meeting. Of particular interest to everyone in attendance was Geror's comments that Northwest Airlines intends to divide the engine into sections, with the nose and accessory section being overhauled once for every two overhauls of the power section. He presented facts to show the relatively small part played by the nose and accessory sections in engine failures.

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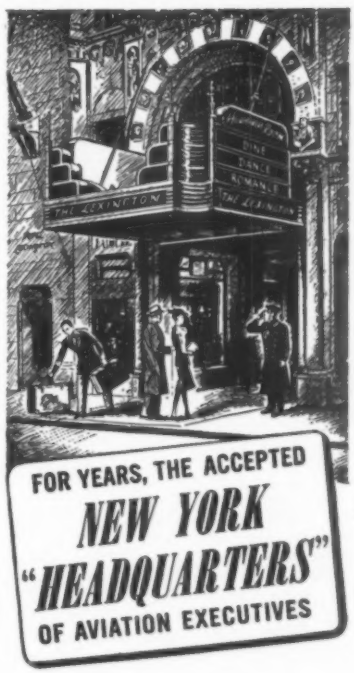

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NEW PRODUCTS

Tru-Oil-Gage

Mastercraft Products, 60 South St., Boston 11, Mass., is distributing the Tru-Oil-Gage shown in the accompanying photo. The gage is manufactured by The Kingston Mfg. Co., North Plymouth, Mass., of cellulose acetate butyrate Tenite, product of Tennessee Eastman Corp., Kingsport, Tenn. It is made up of two lengths of tubing; the outer tube being ¾" in diameter and the inner tube 9/16". Liquid feeds from the drum into the gage through a bronze standard threaded T fitting when a metal cap is in place over the top of the gage. This cap operates a safety valve located in the base of the gage and permits the fluid to flow. Red calibrations on the outer tube and a red cork float contained in the inner tube provide a quantity reference.

If the outer tube is damaged, pressure on the inner tube and safety valve will be released and the flow will automatically cease. The gage is held in place on the 55 gallon drum by means

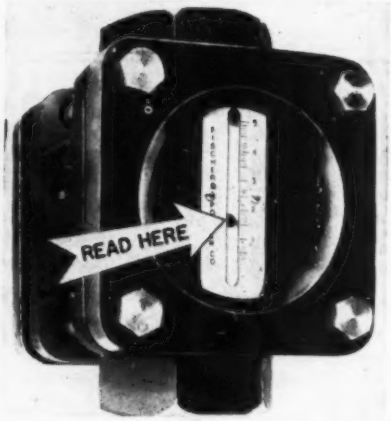
of a rustproof bracket and bolt. No part of the gage can rust. It is not usable in chemicals injurious to plastics or where subjected to temperatures over 145 degees F.

Components Test Stand

Pacific Airmotive Corp., Burbank, Calif., has announced a new hydraulic components test stand, designed for testing cylinders, regulators, valves, accumulators, hoses, etc., operating at pressures up to 3,500 PSI and 15 GPM. Infinite variable pressure and volume are reported obtainable to the maximum limits. Features of the stand, called PA 898-B, include: electrically driven pump for static pressures up to 10,000 PSI; heavy-duty pump (15 GPM at 3,500 PSI) driven by 3-phase electric motor; AN type elements needed to filter the hydraulic fluid; large oil reserve automatically maintained at set temperature; instrumentation including compound gauge, temperature gauge and three pressure gauges; flowmeters for reading both high and low flows, and welded steel construction with metal cabinet.

Magna-Sight Flow Gage

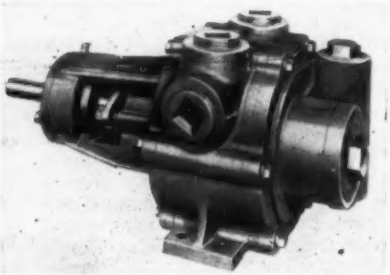
Fischer & Porter Co., Hatboro, Pa., is marketing a new flow guide. It consists of a standard F&P Bull's Eye body with a fixed diameter orifice at the vertical fluid inlet. A tapered plug is suspended



in the fluid stream within the orifice. Imbedded in this tapered plug is a permanent magnet. As fluid flows in the orifice, the plug is raised in proportion to the mass flow and in its proportion carries with it an externally mounted steel ball which moves across a calibrated flow scale providing the operator with a flow value. The rear enclosure is a heavy herculite window which permits visual observation of the fluid. The Magna-Sight flow guide is made in eight sizes from ¾" to 4" with maximum flow rates from 3.5 to 250 gpm. Minimum measurable flow rate for any given indicator is 1/10 maximum flow. Flow guides are made of iron, steel.

Tri-Rotor Pump

The Yale & Towne Mfg. Co., Stamford Division, Stamford, Conn., is marketing a heavy duty Tri-Rotor pump for handling non-lubricating materials. Especially applicable for handling aviation gasoline, naphtha, solvents and similar fluids at differential pressures of 50 psi and under, the Tri-Rotor pump may be



equipped with solid, by-pass or variable volume control type heads. The units are supplied with iron or bronze fitted pumping members. Also used are Timken double roller combination radial and thrust bearings integral with the shaft housing. A special alloy shuttle complete with carbon bushing is used to insure long trouble-free life when handling clean, non-lubricating materials. The pump casing is of cast iron construction and the pump is available in three sizes: 2" for 80 gpm, 2½" for 90 gpm and 3" for 100 gpm.

High Voltage Rectifier

Bradley Laboratories, Inc., 82 Meadow Street, New Haven, Conn., has in production a new high voltage selenium rectifier rated at 5 milliamperes. Model number is SE8M. It features a tubular housing, measuring ⅜" in diameter, and two tinned pigtail leads. It is designed to fill the need for small rectifiers adapted to portable and sealed equipment, involving low current, high voltage requirements. This rectifier supplements the SE8L unit recently introduced and rated at 1.5 milliamperes D. C.

Velocity Limiting Valve

Pneu-trol Devices, Inc., 3122 North California Ave., Chicago 18, Ill., is marketing a velocity limiting valve for use where top limits of flow velocity and volume are desired. The valve can be connected into an air or gas line and calibrated to shut off instantaneously line flow whenever the velocity or volume exceeds the setting. In operation, a stainless steel ball is seated and held in the closed position by high line pressures or volumes until such time as the pressure is exhausted.

Contour Cutter

Heath Engineering Co., Fort Collins, Colo., is marketing a Contour Cutter designed to reproduce a pattern in any sheet steel or heavy plate steel. The unit

uses a standard acetylene machine cutting blowpipe to provide simple, fast, accurate operation in which master patterns can be changed easily. The pattern tracing finger incorporates a variable speed, magnetic rotor which follows the master pattern. Optional operating speed permits adjustment to accommodate various metal gages. The unit operates on either AC or DC current and is light enough in weight to permit easy handling.

Power Saw and File

Producers and Distributors, Inc., 4015 MacArthur Blvd., Oakland 19, Calif., has announced the availability of an improved portable power saw and file attachment known as the KEY-HAK. The unit consists of a simple attachment 11½" in length which attaches to the consumer's regular electric or air drill or motor driven flexible shaft of either ¼" or 5/16" Jacob's Chuck capacity. Weighing four pounds, the KEY-HAK is

finished in triple chrome plate and uses a mechanism riding on three heavy duty ball bearings with sealed in lubricant. The manufacturer claims it will accomplish any of the work normally performed by a key hole saw or hack saw. It can be used to cut masonite, bakelite, celotex, rock or asbestos board, corrugated metal, plywood, rubber, etc.

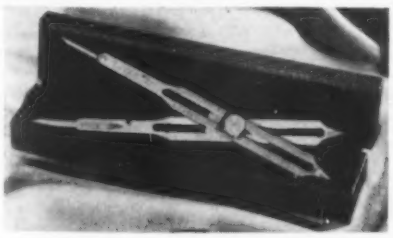
Quick Disconnect

Binks Manufacturing Co., 3122 Carroll Ave., Chicago 12, Ill., has developed a quick-detachable connection that will shut off fluids under pressure when the hose connection is broken and instantly

restore the flow when the connection is re-established. The unit uses a bayonet-type joint which makes its operation very simple by a mere turn of the wrist. There are no threads to match or couplings to tighten. It is a companion product of the Binks quick detachable air connection now in use. Both units are made in standard and material hose sizes with standard threads to fit all Binks fittings, spray guns and painting equipment.

Proportional Dividers

Weems System of Navigation, Annapolis, Md., has introduced a new type of proportional dividers that enable quick, accurate solution of speed-t e-distance problems in air navigation. Suitable for



use with statute or nautical miles, the proportional dividers are exactly like the dividers used by draftsmen and chart-makers except that they have scales engraved on their surfaces providing speed and time references. Given any two of the three quantities—speed, time and distance—the third can be found quickly by using the dividers with any convenient linear scale such as the distance scale on a chart or plotting sheet. Information, and sample problems available on request. Price $24 including velvet-lined instrument box.

Metallic Bushings

Buchanan Electrical Products Corp., 1290 Central Ave., Hillside, N. J., has introduced an insulated metallic conduit bushing to provide protection against abrasion of cable insulation and accidental grounds. Known as "Bushends," the units require no inside locknuts and are light in weight and low cost, according to the manufacturer. Constructed of corrosion resistant wrought alloy, "Bushends" feature clean-cut threads, deep knurls and tough insulation of good dielectric strength which is resistant to moisture absorption. The insulation is permanently secured to the metallic base. "Bushends" are available in all sizes and are fully approved by Underwriters' Laboratories.

Ground Power Unit

Industrial Electronics & Transformer Co., 1801 East Slauson Ave., Los Angeles 11, Calif., has introduced a complete line of aircraft ground power units. The line includes gasoline engine generators, electric motor generators, regulated and shunt-stabilized rectifiers in all ratings and ranges for commercial and military aircraft. The gasoline engine generators are available either mobile or self propelled with either constant potential or for jet engine starting and have ratings from 500 to 2000 amperes at 28.5 volts. The model illustrated is rated at 750 amperes continuous.

The electric motor generators feature electronic controls for .5% regulation and ratings from 125 to 1200 amperes at 28.5 volts. The regulated selenium rectifiers with electronic controls range

from 45 to 2000 amperes DC, continuous at 28 volts. Shunt-stabilized rectifiers provide 8% voltage regulation with ratings available from 125 to 500 amperes output.

Silicone Insulating Resin

General Electric Co.'s Chemicals Division, Waterford, N. Y., has designed a new silicone insulating resin to enable electrical equipment to operate at temperatures as high as 180 degrees C. Designated G-E silicone resin #9989-1, the new resin can be used for impregnating spun glass and asbestos wire coverings and for binding coils, windings, and other motor generator and transformer parts.

Silicone 9989-1, which has dielectric qualities, dries tack free in less than 30 minutes at relatively low temperatures and can be cured to a tough flexible film. It can be cured in conventional equipment at temperatures ranging up to 250 degrees C. It has solids content of 60% and average viscosity of 200 cp at 25 degrees C.

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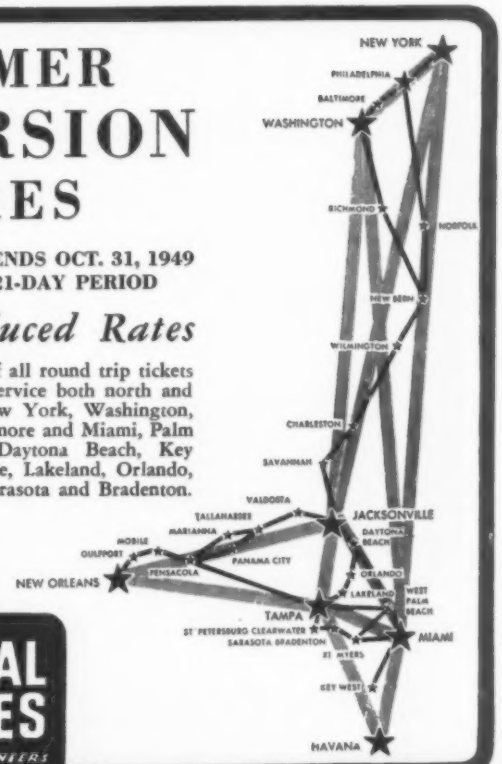

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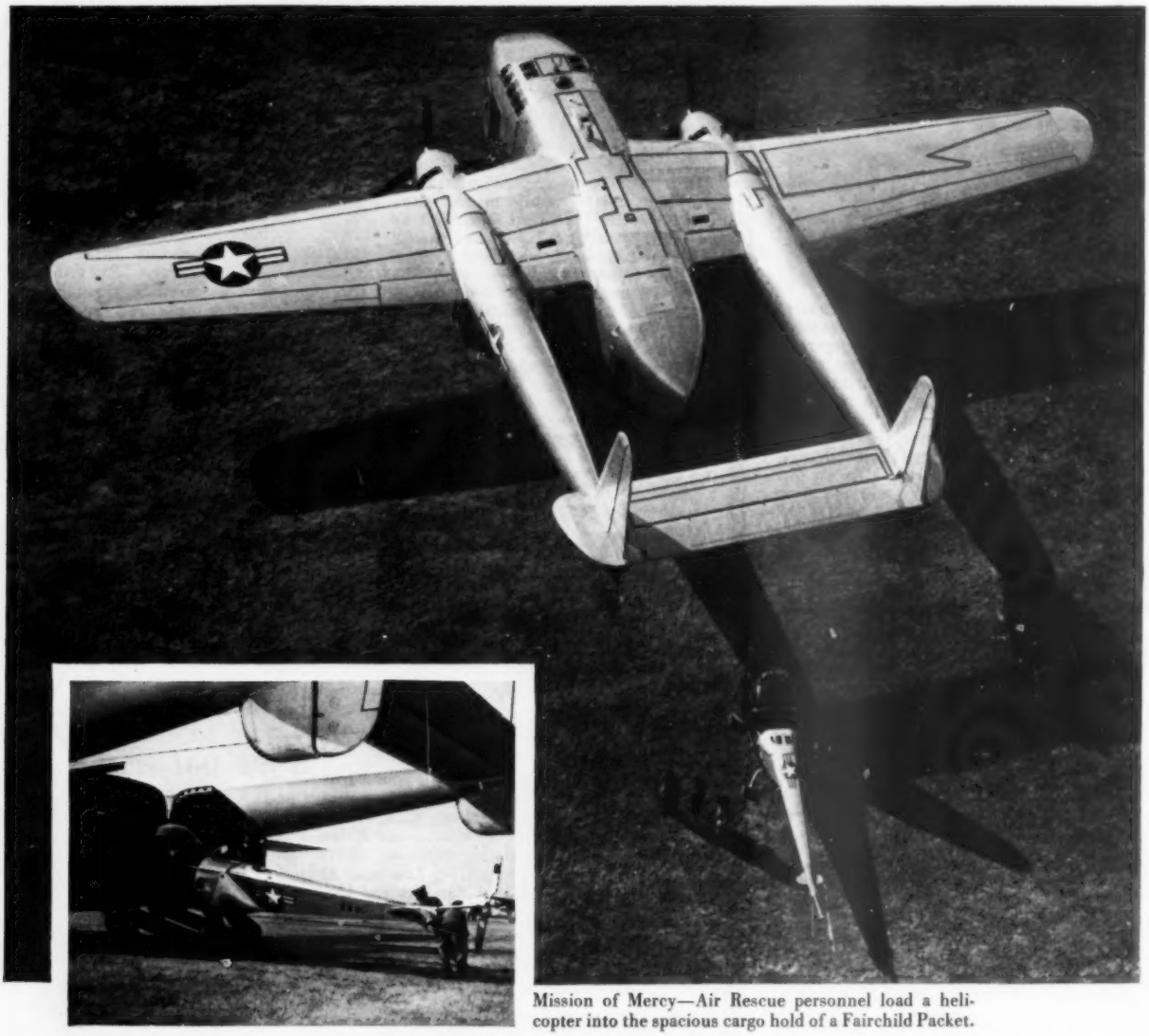

Mission of Mercy—Air Rescue personnel load a helicopter into the spacious cargo hold of a Fairchild Packet.

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AIRPORTS
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21st Airport Executives Convention Best to Date

If there was any single theme dominating the 21st annual convention of the American Association of Airport Executives at Oklahoma City April 25-27, it was the speech of Dr. John H. Frederick, professor of transportation at the University of Maryland, who told the meeting that "it is time for the airport managers to step out of the job holder class."

Airport Management—Job or Profession. That was the keynote address and that was the keynote of the 21st annual convention.

"This has been termed a 'controversial subject' but to my mind there should not be a bit of controversy about making the job of the airport manager more important in the eyes of others," Dr. Frederick said. "The only possible controversy would appear to arise when we consider how we are going to go about making airport management a profession instead of a job. In fact, because of the way you gentlemen have been handling your jobs, airport management has already assumed many of the characteristics of a profession. It has already proven its importance and this importance is going to increase tremendously."

The basic reason why professionalization is needed in airport management, he said, is that it will establish and then maintain essential and uniform standards of practice. To attain a professional status, airport managers must broaden their horizons and extend their knowledge of air transport practice, the economics of transportation and general management.

Hold Unique Position

"Airport managers occupy a unique position in the transportation system of this country. They are operating, as a rule, public facilities used by privately owned and operated common carriers—the airlines, by private and contract operators of planes and often by aircraft of the armed services—all at the same time. Airport managers need to realize the importance of their positions—of their profession."

Managers attending the AAAE sessions seemed to have anticipated Dr. Frederick's counsel. The program was full and the attendance good. The discussions were serious and definitely on the constructive side. There was a growing awareness that airports have become big business and must be placed on a paying basis. It was by far the best convention to date.

A key to the seriousness of the sessions was the adoption of no less than 31 resolutions. Some of the more important of these resolutions were:

Urging Congress to broaden R.F.C. powers to enable that agency to assist in financing construction of hangars, terminal buildings and other revenue-producing buildings on airports.

Strenuously objecting to adoption by the CAB of the proposed 292.1 regulations restricting the operations of irregular carriers.

Requesting the CAA to complete and release a list of charges in effect at airports throughout the country relating to landing fees for scheduled passenger and freight airlines, rentals and concession rates.

Giving complete support to certification and establishment of common carrier scheduled airfreight carriage, permanent and flexible authorization for contract carriers, and certification of airfreight forwarders.

Recommending that airport traffic control towers be operated as an integral part of the federal airway system and that the cost be borne by the federal government.

Opposing any regulation at federal level which would allow states or other political sub-divisions in the enforcement of safety to in any way revoke or suspend a federal certificate.

Recommending that any installations made on an airport beyond those required for visual flight operations (GCA, ILS, high intensity lighting, etc.) be considered a part of the federal airway system and be federally financed.

Authorizing the incoming AAAE president to appoint a committee to make a detailed study of the needed standards of airport operations practices.

It was clear that the majority of airport managers attending the convention favored free scope of activity for irregular and airfreight operators and an increasingly greater assumption of costs of airport operations by the federal government. Although the subject didn't come out in the open at the meetings, there was a rather strong undercurrent of feeling that the scheduled airlines were not "paying their way" at local airports.

Value of Local Services

The value of local air services, irregulars, and airfreight operators, to an airport was demonstrated by C. V. "Bud" Burnett, manager of Detroit City Airport. Several years ago the scheduled carriers pulled out of City Airport because of limitation on equipment and Burnett was faced with a problem of supporting the airport with non-carrier activities. Income from air freight operations has been one major factor in building up a gross profit of $70,000 in the last 12 months. An intra-state airline service connecting Detroit with the Upper Peninsula of Michigan by Nationwide Airlines has also been helpful.

"Only one thing remains necessary for a vast increase and an immediate expansion of the air freight industry and that is for the CAB to recognize the advantages to the nation's economy in the building up of a strong air freight industry," Burnett said. "It would appear from recent events that the CAB has gotten into such a rut in focussing its attention on the carriage of passengers by scheduled airlines that it has failed to recognize the magnitude of the air freight potential. Those of us who have helped to nurse this industry from its swaddling clothes to its present great development can well afford to take the time to notify not only the CAB but our Congressmen and Senators as well in order that this fast expansion be not interrupted."

The AAAE awards committee announced that three honorary memberships had been approved for meritorious

AAAE Proceedings

The 1949 Convention Proceedings of the American Association of Airport Executives (held at Oklahoma City, Apr. 25-26-27) will be available in book form about June 1 from Leigh Fisher & Associates, 7337 Churchill Ave., Detroit 6, Mich.

Pre-publication prices are: One to four copies, $1.85 each; five to 15 copies, $1.75 each; 15 copies or more, $1.65 each. After May 30, all copies will be $2.25 each.

services. One went to George Haddaway, editor and publisher of *Southern Flight*, for his untiring fight to remove airport controls from "City Hall"; another went to Representative Carl Hinshaw. The third went to Leigh Fisher of Leigh Fisher Associates, Detroit, for his management of the convention and his long services for AAAE. Bill Odum of Honolulu-to-Teterboro fame, was the speaker at the annual banquet. The Oklahoma City Chamber of Commerce provided lavish entertainment. The 1950 convention will be at Columbus, O.

Airport Briefs

The Federal Building at **N. Y. International (Idlewild) Airport** is expected to be ready for occupancy in about 60 days. The three-story $4,500,000 structure will house CAA, Weather Bureau, Immigration and Naturalization and other government agencies.

Codie C. Guthrie, operating under the name of the **Murray Flying School,** has taken over management of the Murray (Ky.) Airport and will offer all general flying services to the public.

Missouri Division of Resources and Development, State Office Bldg., Jefferson City, Mo., is offering free its 1949 **Aeronautical Planning Chart and Airport Directory.** It is a single chart covering the entire state.

Plans for a new $4.5 million terminal building at **Philadelphia International Airport** are expected to be completed by early fall. Current improvement projects at the field are costing $3,720,000.

San Francisco Airport can now separate all-cargo planes from passenger planes as a result of installation of two freight loading gates at the air mail and cargo building adjacent to the principal terminal. It is planned to increase the number of international loading gates at the field from three to five.

Baltimore Municipal Airport now has a deputy airport manager to assist Manager Josh Rowe. He's Douglas C. Wolfe, formerly airport manager at Chicago Hammond Airport in Lansing, Mich., and more recently operations manager at Teterboro Airport.

Port of N. Y. Authority has approved letting of another $2 million in contracts for airport improvements, chief of which will be power and control cable installations, electrical and communication ducts and a slope-line approach lighting system at Idlewild.

Frederick L. Wehran, former owner of **Teterboro Airport,** will be retained by the N. Y. Port Authority in a consulting capacity, having found that outside responsibilities would not permit him to perform management duties on a full-time basis. **James R. Sharp,** formerly assistant superintendent of La Guardia Field, has taken over as superintendent at Teterboro.

Construction is due to start within the next two weeks on a two and three-story extension to the main terminal building at **Washington National Airport.** Contract calls for completion of the reinforced concrete structure within 450 days. Successful bidder was the F. H. Martell Co., Inc., of Washington. Amount of the contract is $1,487,000.

Immigration and Naturalization Service reports credit **Miami** with leading all U. S. terminals in the volume of foreign air travel for 1948, with 450,037 air passengers arriving and departing for points outside continental U. S. The trend at Miami for the first quarter of 1949 was upward. Number of international passengers handled during the quarter was 116,668.

W. H. Coffin, manager, says report that sale of **Vail Field,** Los Angeles, to a property holding company, does not mean airport operations there are likely to end soon. Some of the airport acreage is being sold, but the field will be in full operation for an unlimited period in the future. . . American Airlines has asked CAB permission to serve the northern N. Y. Metropolitan area through **Westchester County Airport** at White Plains, in addition to La Guardia and Newark airports.

Who's the Goat?

Who got whose goat and who was the goat in the deal became a major problem at the airport executives meeting in Oklahoma City.

As part of the entertainment for the visting airport men, the Oklahoma City Chamber of Commerce staged a pow wow and in one of the events 40 lbs. of butter were given away. Frank Hidinger, manager of the Cedar Rapids, Iowa airport, won the prize but instead of giving him butter a live goat was led in.

It never occurred to the Chamber that anyone would want to take home a goat, but, sure enough, Ridinger did. This put the Chamber in a spot as the goat had been borrowed from a local dairy. At last report the Chamber was going to make good by delivering a real goat to Cedar Rapids and Ridinger was preparing a special ceremony for the arrival.

At AAAE Convention

1. New President—Don W. Martin (left) with Russ Johnston, Springfield, Ill.
2. Mel Nuss (left), Secretary-Treasurer, with Doug. Langstaff, Past President.
3. Neil Brackstone (left), Lansing, Mich. with Pat Moore, 1st Vice President.
4. Cecil C. Meadows (right), 2nd Vice President, with Walter E. Betsworth, 3rd Vice President.
5. Clyde Cole (left), Flint, Mich., with Homer Hoskins, Pontiac, Mich., New Director.
6. W. H. Lyons (left) Norfolk, Va., with Jack Bolton, Columbus, O., New Director.
7. Frank Hidinger (center), Cedar Rapids, Ia., New Director, with Emory Cox (left) Wichita, Kan. and Harlingen, Tex., hostesses.
8. Peter Powell (left), Lexington, Ky., Director, with Al Near, Louisville, Ky.
9. Charlie Short (left) Tulsa, Okla., with Wayne Parks, Beaumont, Tex., Director.
10. Dick Wolf (left), Sioux City, Ia., with Frank Fox, Worcester, Mass., Director.
11. David Leigh (left), St. Louis, Mo., Director, Frank Spence (center), Line Material Co., Stroudsburg, Pa., and Louis Inwood, Kansas City, Mo.
12. Carl C. Calvert (left), Hubert Stark (center), and Fred Alley, Director, all of Charleston, W. Va.
13. Vic Dallin (left), Phila., Pa., with Stanley Draper, Managing Director, Oklahoma City Chamber of Commerce.
14. Leigh Fisher (left), AAAE Convention Mgr., with Jack Horner, Airport Consulting Engineer, Green Bay, Wis.
15. Del Rentzel (right), CAA Administrator, with Art Thomas, Des Moines, Ia.
16. Hervey Law (left), Port of N. Y. Authority, Archie Armstrong (center), Newark, N. J., and Vince Carson, LaGuardia Field, N. Y.
17. Sally and Bob Schmidt, Tucson, Ariz.
18. Ed Travis (left), CAA, Fort Worth, Tex., and Cy Seybold, CAA, Santo Fe, N. Mex.
19. Benny Griffin (left), Washington Nat. Airport, with Wayne Parrish, Editor and Publisher of AMERICAN AVIATION at IKSA HELIH HOMA POW-WOW. They were made Chiefs of the KIOWA Tribe. Parrish was given name of Pe-Hote Goot-Tah-To-Keah which means Chief Scribe of the Flying Clan.
20. Glen Banfield (left) Horseheads, N. Y., Tracy Bushnell (center), Elmira, N. Y. and Ed. Houters, Rochester, N. Y.
21. John Casey (left), Chicago, Ill. and Francis Geng, St. Paul, Minn.
22. W. J. Chanter (left), Jackson, Mich., Les Bryan (center) Univ. of Ill. at Champaign, and Wiley Post, Allentown, Pa.
23. Bill Raymond (left), ATA, Washington, D. C., Jim Buckley (center) Port of N. Y. Authority, and E. E. Lothrop, American Petroleum Institute, N. Y.
24. Ham Webster (left), Dayton, Ohio, and Les Schroeder, St. Paul, Minn.
25. Bill Ware (left), Dallas, Tex., with Bud Burnett, Detroit, Mich.
26. Earle Bigler (left), Seattle-Tacoma Airport, with Dayton Witten, Boeing Field, Seattle, Wash.
27. Matt Ryan (left) Marshall, Minn., with Don Swenson, Rochester, Minn.
28. Frank Bishop (left), Napa, Calif., with Slim Kidwell, Central Airport, Los Angeles.
29. N. W. Edwards (left), Univ. of Wichita with Paul Koonce, Houston, Tex.
30. Herb Whitney (left), CAA, Kansas City, with John Burke, Wiley Post Airport, Oklahoma City, Okla.
31. Charlie Hanst (left), CAA, Atlanta, Ga., and Merle Houston, Harlingen, Tex.
32. Howard Ailor (left), National Fly-Ur-Self System, N. Y., with Ralph Hall, Texas Co., Chicago, Ill.

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AIRPORTS

CAA 'Home Rule' Concept Slashes Airport Red Tape

By Gerard B. Dobben

Long-awaited simplification of regulations for administering the Federal Airport Act were placed in effect last week by CAA Administrator D. W. Rentzel with the result that yards of government red tape have been eliminated for the benefit of state and local sponsors of airport projects. If this new program works out successfully, it might well set a pattern for federal-local contractural relationships in many fields outside of aviation.

The new regulations are based, in considerable degree, on the home rule concept. Instead of requiring the states and local governments to submit to arbitrary rules and regulations laid down by the Federal government, the new regulations follow, wherever possible, the local way of doing business.

Best example of this new relationship relates to submission of evidence relating to title to land involved in a project development. The old regulations required title evidence as to property interests held by the sponsor, which may be in the form of title certificate, title insurance policy or opinion of a qualified attorney.

This requirement resulted in reams of correspondence between CAA and the project sponsor. Often it held up consummation of the sponsor's agreement by months.

Under the new regulation, the CAA accepts a certificate of title to property on the basis of the city attorney's certification, with a proviso that in case of a title defect showing up later, the city will correct it.

Fewer Lawyers Needed. Phillips Moore, director of the Office of Airports, says the new simplified regulations will reduce his need for legal talent in administering the regulations by 50% and somewhat comparable savings in time, at least, may be expected on the part of city and state attorneys who have been involved previously in meeting the rigid Federal requirements.

Moore said general streamlining of procedures already had made it possible to reduce his Washington staff from 121 to 110 and a further reduction of 10 employes would be accomplished by June 30. A cut of 65 employes from district and regional office staffs of the Office of Airports also will be made by June 30, it was stated.

"The new regulations will mean a lot less work for the sponsors and a lot less work for CAA," Moore stated. "As a further example, the new regulations provide that the sponsor's form of contract will be used. Heretofore we required the sponsor to use our standard form of contract."

Moore indicated that eight bills introduced by Sen. Pat McCarran (D., Colo.) and Rep. Dwight L. Rogers (D., Fla.) are designed to further the streamlining program. These include advances to sponsors to meet their monthly payments to contractors, an amendment to change the 75%-25% relationship between the apportioned and discretionary funds to a 60%-40% ratio to make possible transfer of unused apportioned balances from states which cannot raise matching funds to states that can; authorization to permit CAA to increase the maximum federal share for a given project not to exceed 10% where unusual construction problems are met.

Another amendment sought would permit the Federal government to participate in land acquisition costs on the same percentage basis as in the general construction project and still another would remove restrictions requiring the Administrator to submit to Congress requests involving Class IV fields and larger where the Federal share of the cost does not exceed $50,000.

A summary of main changes in Part 550 of the airport regulations follows:

1. Former Regulations (550.5(c)(4)) required that each Project Application containing any reference to lands held, or to be acquired, by a sponsor be accompanied by a survey map prepared by an engineer or a surveyor.
   Amend subparagraph 550.5(c)(2) to provide that each Project Application shall be accompanied by a property map designated as Exhibit "A." This proposal eliminates the necessity of a survey map. The property map will not have to be prepared by an engineer or a surveyor.
2. Former Regulations (550.7(b)(1)) required all contracts to be awarded on the basis of advertisement and open competitive bidding, unless some other method was specifically approved by the Administrator.
   This Section is amended to allow negotiated contracts for amounts of $2,000 or less to be approved by the Regional Administrator without prior approval of the Administrator.
3. Former Regulations required that all bids remain sealed until publicly opened and read aloud at the time and place specified in the invitation for bids (550.7(b)(3)), and that the sponsor require the contractor to furnish and maintain a performance bond (Form ACA-1638A) and a payment bond (Form ACA-1638B) (550.7(c)).
   These requirements and forms are eliminated. A provision has been added to the Regulations specifying that all contracts meet the requirements of local laws.
4. Former Regulations (550.7(b)(4)) required the sponsor to submit, after the opening of bids, an abstract of bids and its recommendations for award on Form ACA-1631.
   Form ACA-1631 is eliminated and the sponsor is allowed to submit his tabulation of bids and recommendations for award on the forms customarily used in local practice.

5. Former Regulations (550.7(b)(4) and 550.7(h)(4) and 550.9(f)) required the sponsor to submit a detailed estimate of costs on Form ACA-1628 in the case of lump sum contracts involving more than one payment to the contractor and in the case of force account work.
This form is eliminated. In the case of force account work a detailed estimate, broken down for each class of costs involved, will still be required, although not on a specific form.

6. Former Regulations (550.8(b)(1)) required that project funds be deposited in a bank, trust company or public treasury.
It is now required only that such funds be deposited with an official, or officials, or depository authorized by law to receive public funds, as the sponsor may designate.

7. Former Regulations (550.9(c)(2)) provided that the aggregate amount of all partial payments for a project shall not exceed 85% of the estimated United States' share of the total estimated costs of the project, or shall not exceed 85% of the maximum obligation of the United States as stated in the Grant Agreement, whichever amount is lower.
This percentage is increased from 85% to 90%.

8. Former Regulations (550.9(f)) required all applications for grant payments to be made on a public voucher, Standard Form 1034, accompanied by an application for grant payment on Form ACA-1625, a summary of project costs on Form ACA-1630, and a periodic cost estimate on Form ACA-1629.
Standard Form 1034 and Form ACA-1625 are consolidated into a single grant payment form.

9. Former Regulations required a formal amendment to a Grant Agreement, where changes were made in the survey or property map, Exhibit "A" to the Project Application.
The language in the Grant Agreement and the Regulations allows certain revisions of Exhibit "A" by informal substitution of a new Exhibit "A" and without the necessity of a formal amendment to the Grant Agreement.

10. Former Regulations (550.5(c)(5)) required title evidence as to property interests held by the sponsor, which may be in the form of a title certificate, title insurance policy or opinion of a qualified attorney, as the sponsor may elect, but shall include as a minimum, an opinion, guarantee, or certification as to the state of the title by a qualified attorney or title company, indicating the records or documents examined in determining the status of the title and the period covered by the search.
New regulations eliminate the requirements of submitting a title certificate, title insurance policy or attorney's opinion. Paragraph 3, Part II, of the Project Application contains a certification by the sponsor that its representations as to property interests stated in the Application are based upon a title examination by a qualified attorney or title company and that such attorney or title company has determined that the sponsor holds the stated property interests in such lands. A warranty is added to Part III of the Project Application which guarantees that the sponsor would correct any defect, which might be uncovered at any later date, in the title to any of the property.

11. Paragraph 4, (b)(2), Part III, of the Project Application contained several requirements regarding the furnishing of services and regarding the sale of aviation gasoline and oil.
Paragraph 4 (b)(2), of the Project Application is deleted in its entirety.

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PRETESTED IDEAS

Field Condition Board

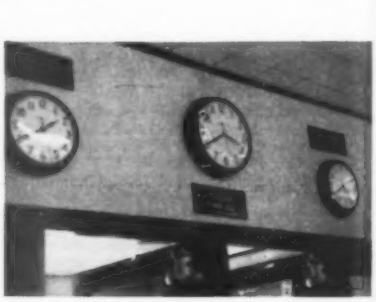
THIS CLEVER idea keeps a continuous check between the airport maintenance and operations departments and the control tower, according to John C. Stevens, operations manager for the County Airport Corporation, Westchester County Airport, White Plains, N. Y., (in the picture) who devised the board. An ordinary classroom type blackboard has a facsimile map of the airport showing all runways, taxiways, buildings, wind indicators, etc., in white paint.

Each runway and threshhold light is shown to scale with an identifying number which corresponds with the number painted on the concrete pad of each light out on the field. The control tower notifies operations of the exact locations of inoperative lights on the field and a service man is sent out to replace the lamp or identify its number if it can't be fixed immediately. The inoperative light is circled in white chalk on the board until it has been repaired.

Also marked on the board are soft or unusable turf areas; runways, taxiways, or other paved areas undergoing repair; temporary obstructions, etc.

Multiple Clocks Aid Air Passengers

AT TULSA, Municipal Airport, manager Charlie Short conceived the idea of using three clocks instead of the usual single clock to help air passengers (and airline personnel as well) keep track of the time at both ends of their across-the-country flights. The clocks are conveniently mounted over the door of the waiting room leading to the ramp and are plainly identified with large black and white signs. Charlie says that the clocks clear up a lot of confusion and also save the airport and airline personnel time in answering questions.



Tie-Down Cables

HERE IS THE solution to quick and handy tie-down on the flight parking line—especially for itinerants who are not familiar with the field. Two parallel continuous steel cables are used—one for the wing ropes and one for the tail tie-down.

The cables are extra heavy, (at least No. 1 U. S. S. Gauge) and are securely anchored—not only at the ends, but at several points in between. Harness rings slide along the cables for tie-down ropes in any desired position.

Fred Smith, manager of McArthur Airport, Islip, L. I., N. Y., who had them installed at his field says that one of their main advantages is that they absorb the strain normally taken by the plane when ordinary fixed anchors are used. Our Airport Editor, Bob Blatt, is pictured trying out the tie-down cables on his Taylorcraft.

Keeping Costs Down:

Personal Plane Owners Must Increase Utilization

Eugene W. Norris, formerly of Luscombe Aircraft Corp. and now with the Flight Safety Foundation, flew his two place Luscombe 36,000 miles in one year. When his carefully kept records were reviewed the cost per mile was 6.4c. This is an interesting testimony for the light airplane. Speaking before the Institute of Aeronautical Sciences on April 29, Norris outlined the 12 months' experiences and left some enlightening facts for further study.

11.4c—Country Average? Is Norris's experience directly applicable to what you can hope for in operating your own light airplane? Not according to CAA's figures for the year 1947. The record shows that the average light plane flies 187 hours per year. This is approximately half of the utilization experienced by Norris. Citing the effect of low utilization, the author of the paper shows that an airplane that flies only 15,000 miles per year (representative of 187 hours flight) will have an indirect operating cost of 8.65c per mile plus 2.75c per mile direct operating cost—240% higher costs for a 50% reduction in total miles flown.

Even this is a rosy picture for a lightplane used for personal pleasure and not for business, for CAA's figures further show that during this same period users of light airplanes for personal enjoyment, as distinguished from business use, experienced only 60 hours per year utilization. Norris concludes that justification of the light airplane as a pleasure vehicle must be on the basis of other than economic factors.

But there are many business applications in which personal aircraft can see equivalent or greater utilization than that experienced by Norris. CAA's records show that aircraft used in training activities averaged 317 hours during 1947. Used to increase the scope of a salesman's territory, to permit the executive to spend more time at field offices, in open territory as in the mid-west or over mountainous terrain where normal transportation is irregular or non-existent, and for a host of similar activities, they are self supporting. CAA has compiled a list of over 100 such uses to which the light airplane has been successfully applied.

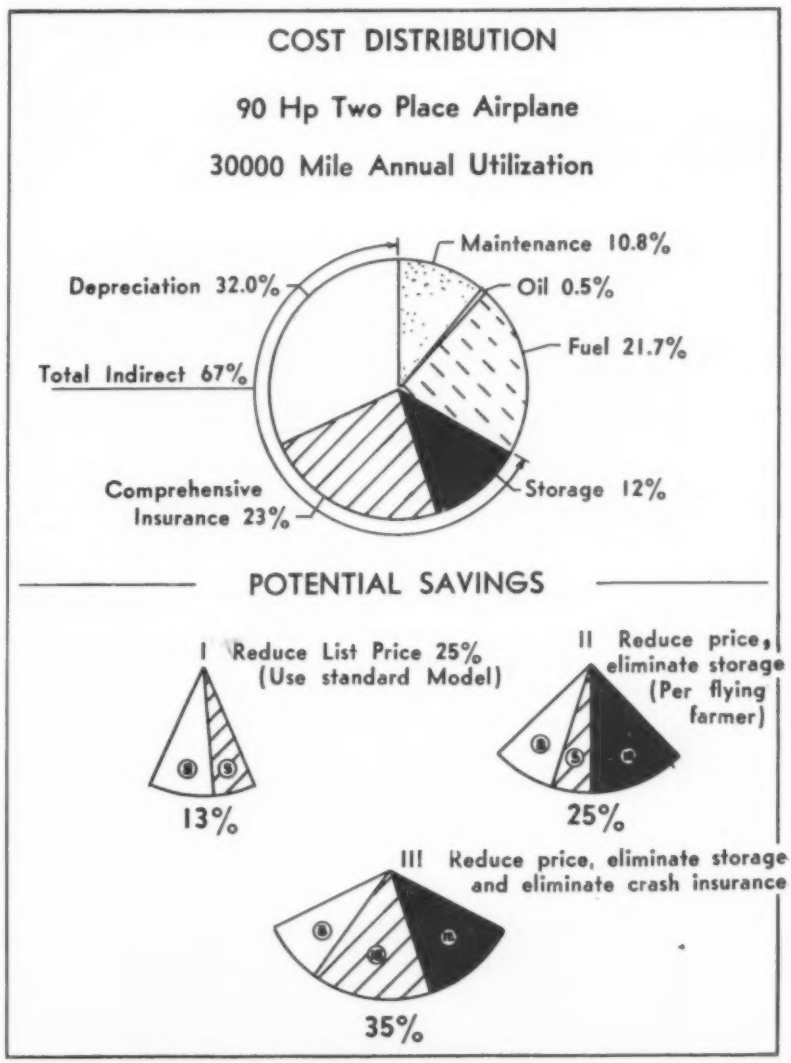
Key to Safety. Safety, or the lack of it, has always been a deterring factor in expanding the base of the light plane market. Norris' paper outlines some interesting facts about the 9253 accidents reported in 1947. Ninety percent of all accidents were caused by pilot error, occurred during landing, take-off and taxiing, or through collision with objects, stalls, weather, etc.

The safety conscious and conservative type of personnel using aircraft for business purposes might well avoid any of this type of accidents. This would materially reduce the safety hazards leaving only 10% of over-all accidents to contend with.

Norris claims that "today's biggest problem with weather is the proper determination of when to and when not to fly" . . . He sees the attempts of private pilots to increase utilization by using the plane under maginal conditions as a dangerous tendency and feels that one of the big costs of private flying, high insurance rates, could be minimized by more conservative personal pilots.

In the instance of the $4,000 Luscombe operated by Norris, the insurance rates for comprehensive (5% deductible) coverage amounted to $580 per year or 23% of the total cost of operation. To counteract this high cost Norris feels designers should "reduce the degree of piloting skill, technique and attention required for consistent, safe (accident-free) operation, (provide) simplification of structure and systems (for reduction in cost of aircraft and replacement parts), and adopt interim safety devices.

Mandatory Notes Costly. While maintenance costs were the lowest of the indirect operating costs, only .9c per mile, the part played by mandatory CAA requirements is significant. In this one instance, a simple landing gear inspection required on this airplane represented 11% of the first years operating



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LOCAL OPERATIONS

maintenance costs. In this same field, the author's experience favored the use of a dealer or agency familiar with the particular aircraft. By minimizing the greatest single factor in maintenance, the labor involved, costs can be many times lower at the experienced facility.

Ground time is an important factor in lightplane operation. This is particularly true of time spent in traveling between the airport and the city. Norris indicates that on the 210 mile trip from Washington to New York, a 25 minute reduction in ground time is equivalent to a 25% increase in cruising speed for the 100 mph plane. While surveys have indicated the desirability of higher cruising speed, there has been more concern over reducing landing speeds.

Says Norris, "If the landing speed of present day aircraft could be reduced appreciably, we could probably expect an accompanying reduction in take-off and landing distance, an increase in climb, and a general reduction of the safety accident record with consequent increase in sales possibilities."

Increased reliability and safety are dependent upon "improved power plant reliability, simplified instrumentation for control and navigation, lower minimum speed, "hands-off" stability, improved communications reliability and ice prevention means." Although Norris feels these improvements will raise the initial cost of the aircraft he is sure that the increased utilization possible will be more than compensatory if there are no accompanying increases in operating costs.

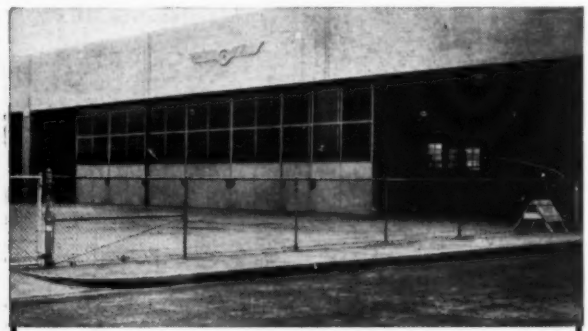
Norris's record of 12 months operation of a two-place personal airplane provides a valuable record of what private flying costs the operator and sound suggestions as to how these costs might ultimately be reduced. In doing so, it establishes the wisdom of using a lightplane for business purposes while emphasizing the fact that utilization beyond that normally attained in non-business pursuits is mandatory to economical justification.

1,008 Hours Aloft

A new world flight endurance record of 1,008 hours, 1 minute, 50 seconds was set by Bill Harris and Dick Reidel, both of Fullerton Flying Service, when they landed at Fullerton, Calif., airport at 11:47 a.m. PST on April 26. The mark was made in a four-place Aeronca Sedan powered by a 145-hp Continental engine.

Previous record was 726 hours, set in 1939 at Muroc Dry Lake, Calif., by Wes Carroll and Clyde Schlieper of Long Beach, Calif.

The record flight was sponsored by the Fullerton Chamber of Commerce, which paid the pilots $1,500 and by Macmillan Petroleum Corp., which contributed $5,000. An added $2,000 was raised by community subscription.



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Personal Plane Sales 50% Below Last Year

First quarter shipments of personal aircraft by 10 companies reporting to the Personal Aircraft Council of the Aircraft Industries Association were nearly 50% below shipments for the same three months of 1948. Total was 754 this year, compared with 1,472 a year ago.

Due principally to a gain in sales of larger and more expensive types of planes, the manufacturers' net billing price on shipments for the first three months of 1949 were down only about 40% totaling $3,607,000 as compared to billings of $5,947,000 for the same period last year.

March shipments were indicative of the upward trend in sales of family and executive type aircraft. Shipments for the month included 261 four-place planes and 115 two-place planes, as compared to shipments of 225 four-place aircraft and 344 two and three-place planes in March, 1948.

Sales leaders in the first quarter of this year were the Cessna 170 (119 units), Stinson Voyager (81), Piper Cub Special (71), Ryan Navion (64), Cessna 195 (63) and Beech Bonanza (58).

Aviation Sales and Service

By Robert C. Blatt

Landing Fees: A new trend toward landing fees by some operators is becoming more noticeable. Most of these operators charge the fee only when visiting pilots land at their fields and don't buy gas or oil or pay a tie-down or hangar storage fee for overnight parking. They feel that this practice is justified and that it will help to keep away the "Saturday and Sunday" pilots who just drop in for want of a better place to go, and help to clutter up the already-crowded traffic pattern. The operators report that there are very few objections raised to these fees when the reason is properly explained to them. In most cases the visiting pilots decide to buy gas or oil rather than pay the fee.

Hangar Bird Remedy: *The idea of one of the Dayton, Ohio, operators who used an ultra high pitched whistle, inaudible to the human ear, for hangar "bird trouble" was included in our column in the May 1, '49 issue. We just learned from good authority that while the method was very effective in driving out the birds, it had a very undesirable effect on dogs, cats and rats. A number of dogs and cats were apparently killed by the whistle. One of the dogs, "just visiting" the airport with his owner died at home the next day. The rats were driven to inaccessible parts of the hangar and buildings where they died—and in many cases couldn't even be removed. Another operator, who asked us not to divulge his name, told us that he uses poisoned bird seed with success. He suggests, however, that operators trying this method should be on the alert for their local "Be Kind to Animals" groups who would undoubtedly object strenuously.*

Makes Grass Grow: *Charles Hanst, CAA's Region II airport management consultant, suggests that operators and managers use the sludge from their city's sewage disposal plant on the airport grass. Charlie advises to have your old gas mask handy, in case the wind isn't just right.*

Automatic Light Control: A number of operators have asked us whether there isn't some method of having their field lights turned on automatically, when one of their pilots gets caught out after dark or some itinerant tries to locate the field at night. There are several methods of accomplishing this—with varying degrees of success. One method uses a sound-sensitive cell located on top the hangar or other airport building which is supposed to turn on the lights from the sound of an airplane flying in the vicinity. The trouble with this arrangement was that motorcycles and trucks on a nearby highway also turned on the lights. In one case it was found that mosquitoes flying close to the sound sensitive cell also had the same effect.

A radio controlled system was set up at Mineral Wells, Tex., several years ago by Cy Seybold, CAA district airport engineer at Santa Fe, N. Mex., in cooperation with some of the equipment manufacturers. When a pilot approached the field, which was easily located by the airport rotating beacon, all he had to do was to turn on his radio transmitter and call out "Lights" in the microphone, and presto, the field lights turned on. We suggest you write Cy for the complete details.

Trade-ins Make Sales: *According to Jim Welsh, hard-hitting New York Cessna distributor, operators have got to take trade-ins to sell new planes now-a-days. Jim tells how he walked in on a sale the other day. He had been trying to get an operator to take a 170 but the operator was holding off until he could sell a used Navion he had on hand. The operator had a good prospect for the 170 but he wanted to trade a Fairchild 24, asking $2400 for it. Jim talked the operator into offering $1700 for the 24 on trade-in for the 170. The deal went through and he sold the 24 in a few days to another operator in the vicinity. Jim says it's just like the old days of selling cars—when you had to sell 3 used cars to move 1 new one—with some good old fashioned "horse trading" tricks thrown in.*

A little rag doll

JANIE was eight. It was her first trip by air, and she was going to Cleveland with her father to visit Grandma. She told me the whole story while I was showing her around the big DC-6 Mainliner 300. All that time she was cuddling a little rag doll, evidently her dearest possession.

When we landed at Cleveland her father was in a hurry. Janie waved good-by to me and they disappeared into the airport building. It wasn't until we were taking off again that I saw the little rag doll lying on the floor under a seat.

I had Janie's name, of course, and at the next stop I started United Air Lines tracing her address. That night I mailed her the doll. And I still have the sweet letter she wrote me. Things like that make me glad and proud to be a Mainliner stewardess.

Mary Mainliner

P. S. I'm pretty fond of youngsters. Why not bring yours along next time you travel with me on a Mainliner? M. M.

UNITED AIR LINES

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Trans-Atlantic Tourist Fare Disfavored by CAB

The Civil Aeronautics Board has made it clear that it doesn't agree with Pan American Airways President Juan T. Trippe's proposal for a $225 trans-Atlantic tourist fare, but instead favors an increase in the Atlantic fare structure from the present New York-London one-way tariff of $350.

CAB's position was revealed following a meeting with the U. S. carriers prior to their attendance at the International Air Transport Association meeting in Nice, France, which opened last week. Inasmuch as one of the main purposes of the Nice meeting will be to establish future fare patterns, CAB called the airlines in to diccuss the situation.

During the past winter the carriers had left the London fare at $350 but had offered a round-trip excursion fare of 133% of that figure.

Following the meeting, CAB said: "With respect to the fare structures in the Atlantic area, the Board feels that the carriers' approach, reflected in their proposals to raise the on-season fares and to effect a slight reduction in the off-season fares, is sound. Based upon representations by the carriers that the dollar revenues for experienced traffic would be increased thereby, a structure based upon an on-season fare to London of $375 with a 10% round-trip discount and an off-season fare of $335 with a 25% round-trip discount would meet with our approval. The Board, however, would be opposed to any fare structure which, for the same volume of traffic, would not result in revenues at least equivalent to those yielded by present fares.

"The Board is of the opinion that no tourist fares should be instituted at this time."

For several months, and particularly since delivery of the first Stratocruisers, Trippe has been openly advocating a New York-London tourist fare of $225 one-way and $405 round-trip.

Questioned about the Board's statement that it agreed with "the carriers' approach" on raising fares, a CAB official said it would be correct to assume that this did not include PAA. Others attending the meeting included American Overseas Airlines, TWA, Northwest and Panagra.

Cost Not Lower. On tourist service, CAB said there were no indications at present that this service can be performed at substantially lower cost than regular service. "The only claims made for substantial cost reductions in tourist service contemplate the use of an aircraft type (B-377) which has yet to enter regular service and for which no experienced cost data will be available for some time. In addition to this factor, it is inevitable that an appreciable portion of regular-fare traffic will be diverted to tourist flights.

"The physical characteristics of trans-Atlantic air operations are such as to preclude, to a large extent, the differentials of comfort, speed and the like between classes of service which would normally prevent diversion from one class to another.

"While it is recognized that tourist services would create traffic which would not otherwise move, and that such traffic to Europe would further the ECA program, we feel that the possible detrimental effect on the sound development of our air carriers, and the increased cost to the government which would result, argue against the institution of tourist fares at this time."

CAB also said it did not favor a reduction in Pacific fares, that it was inclined to favor an increase in rates to Australasia, and that no decision should be made on cargo rates "which would result in a net reduction of the earnings position."

'No Meal' Tariff Stirs Airline Dispute

Western Air Lines' "no meal" service at 5% lower fare has caused a dispute among some carriers over the question of establishing joint fares over alternate routes. For example, application of the 5% reduction to Minneapolis-Denver fare lowered the total of the local fares on the shortest route between Minneapolis and Los Angeles (through connection with United at Denver) from $109.45 to $107.60. But a passenger can also travel between these terminals via alternate routes involving Mid-Continent and United, TWA and American.

These lines applied to CAB to meet the $107.60, claiming that fully competitive fares represent a thoroughly-established principle of alternate routings. Western said they couldn't do it without eliminating meals, claiming its no-meal tariff is completely different, like coach or tourist fares. WAL won the first round when CAB suspended the other carriers' applications. But in finally determining what philosophy it will apply to his situation, CAB will be up against an entirely new tariff perplexity and its decision will have precedent-making factors.

TWA Shifting Sales Offices to New York

A number of the functions and offices of TWA's sales and traffic department are to be shifted this summer from Kansas City to New York. The transfer will include E. O. Cocke, v.p.-traffic, and other administrators of his staff, plus about 90 employes. Cocke and other officers will continue to maintain Kansas City offices.

Ralph S. Damon, TWA president, said: "Because of the growing importance of international travel to TWA total revenue, we feel that it is necessary to concentrate more of our sales effort in the New York area." By June 1, about 300 operations employes and supervisors will have been transferred from New Castle, Del. to Kansas City.

Air Coach Services

Continental Air Lines is seeking CAB permission to reduce its Kansas City-Denver air coach tariff from $22.10 to $18.45, or to approximately 3.3c a mile. Company points out that rail coach rates in the west are lower than in the east, and 3.3c would put Continental on the same competitive basis with rail as 4c air coach is in the east.

Pioneer Air Lines has filed a tariff proposing 4c-a-mile air coach service to

British Airlines Report '48 Traffic Increases

The three state-owned British airlines (British Overseas Airways, British European Airways, and British South American Airways) showed calendar 1948 traffic increases over '47 of 26.5% in passenger miles, 20.8% in mail ton-miles, and 53.5% in freight ton-miles. Complete figures, reported by the British Ministry of Civil Aviation, follow:

		BEA	BOAC	BSAA	Total
			(000 omitted)		
Aircraft Miles Flown	1948	12,348	26,351	5,350	44,049
	1947	11,539	23,010	4,453	39,002
	% increase	7%	14.5%	20.1%	12.9%
Passenger-miles	1948	150,725	352,029	52,608	555,362
	1947	108,323	283,644	47,186	439,152
	% increase	39.1%	24.1%	11.5%	26.5%
Mail ton-miles	1948	949	7,904	1,092	9,946
	1947	544	6,772	916	8,232
	% increase	74.4%	16.7%	19.3%	20.8%
Freight ton-miles	1948	2,176	10,429	3,026	15,631
	1947	1,320	6,125	2,742	10,186
	% increase	64.9%	70.3%	10.4%	53.5%

Amarillo, Clovis, El Paso, Las Cruces and Roswell, from June 1 to Aug. 29, with 24-passenger DC-3's.

National Airlines' once-suspended $55 Night Bird Miami-New York proposal is expected to be allowed to go into effect May 15.

Northwest Airlines has been authorized to start air coach service from Twin Cities to Anchorage, Alaska, via the "inside" route. Fare will be $126 one-way, plus tax, same as traveling Twin Cities-Seattle via NWA domestic air coach and north to Anchorage on the Seattle-Anchorage coach flight.

Braniff Airways will start "Thrift Flite" air coach service between Dallas-Ft. Worth and Chicago on May 15, if CAB approves. Fare reductions will be up to 35% and will be about the same as first class rail without Pullman. There will be two round-trips daily, one during the day and one at night. Intermediate points will include Moline, Burlington, Kansas City, Topeka, Wichita, Ponca City, and Oklahoma City.

Tariffs & Tours

Monarch Air Lines and **Challenger Airlines** on May 1 established a flight credit card plan. No deposit is required, and a cardholder may charge tickets on the line with which the account is established. It is not good on any other airline.

Northwest Airlines announced that fares on its Stratocruisers will be the same as on regular flights.

Pan American Airways has made an agreement with Hawaiian Airlines which will enable passengers from west coast to fly to any point in the Hawaiian Islands for standard fare of $160 one way or $288 roundtrip.

Pan American Airways and **United Air Lines** have asked CAB for permission to allow U. S.-Honolulu passengers 66 lbs. of baggage instead of 55 lbs., effective June 5.

KLM Royal Dutch Airlines on May 15 will start special excursion roundtrip rates from Miami to several Caribbean points. Round-trip Miami-Havana, for example, will be $34.50 instead of $41.40.

Pan American Airways and Haley Corporation Travel Service are offering all-expense tours to Bermuda ranging from a week to two weeks for as little as $187.

United Air Lines, Northwest Airlines and **Pan American Airways'** tariffs proposing establishment of common fares between points on the mainland and all the Hawaiian Islands have been suspended by CAB. UAL tariffs were to have become effective May 6 and May 21, NWA on May 5 and PAA on May 21. Suspensions are for 90-day periods. Hearing is expected to be held on the proposals.

Air France is quoting New York-Moscow fare of $545 one-way and $981 round-trip, and states it has worked out interline agreements with LOT (Poland) and Aeroflot (Russia) under which a passenger can leave New York on Sunday, arriving Moscow Wednesday.

Over the Counter

By Eric Bramley

Passenger Service

CHARLES FICKEL, a flight superintendent in Denver for **Continental Air Lines,** has received the third award made by the company for "exceptional service to passengers." The company said that although Fickel's work seldom brings him in direct contact with passengers, he always keeps the passengers' welfare uppermost in his mind. He attends meetings of reservations and station personnel on his own time so he can know their problems, and also presents to them flight control's viewpoint. The giving of these awards periodically is an excellent way to make personnel passenger service conscious . . . Mindful of passengers' complaints on damaged baggage, **Mid-Continent Airlines** is testing a vinyl-plastic coating for forward cargo bin floors and companionways to provide a buffer between bag and bin . . . **United Air Lines'** pilots and stewardesses are now using public address systems in D[illegible] to point out scenic points and give information on altitude, weather, etc. Each cabin has 10 loudspeakers.

Charles Fickel, left, Continental flight superintendent, receives company passenger service award from Freeman Fish, passenger service manager. O. R. Haueter, center, v.p.-operations, looks on.

Sales Promotion

JACK MORGAN, traffic representative for **Trans-Canada Air Lines** in Moncton, writes to this column (and thanks for those nice words) to tell us that the TCA boys in Moncton believe that a good sales promotion idea is to sell local organizations on giving away air trips as prizes. For example, the Moncton Junior Chamber of Commerce is buying two round-trip tickets to Bermuda, plus a TCA Skytour, to be raffled off to raise money for community projects. "We feel this idea is a bit out of the ordinary and any airline would be able to use it," he states. "Cars, houses and other such things are generally too expensive for a small club to finance for a raffle, but an airline ticket, whether it be from New York to Washington or from Montreal to Toronto, is within the reach of any organization. Publicity follows naturally. . . ." He sends us a ticket in the Moncton raffle, which we trust will be the winner.

Jerry Kitchen, Challenger Airlines' manager of traffic and sales, has issued to all employes a "reminder" that they'd better get out and promote sales or else maybe the feederline's certificate won't be extended when it expires 11 months from now. It's one of the most potent reminders we've ever seen. It comes in a long folder, which looks like it ought to contain an insurance policy. And it says: "This is your job insurance policy." Inside is a timetable, air freight information, sales tip forms, and other articles which employes should use to "insure" that their company remains in business. On the outside of the folder is a warning that "this policy expires in 11 months." It adds: "However, if all employes follow the above suggestions aggressively for six months, the chances for a five-year renewal of this policy are excellent." It's a real novel idea that should make a lasting impression on every employe.

Traffic

PAN AMERICAN AIRWAYS on June 2 will start thrice-weekly New York-London service with Stratocruisers . . . **Air France** reports its Atlantic flights practically sold out through July 19 . . . Passenger load factor on **Northwest Airlines'** transcontinental air coach service averaged 90.8% eastbound and 61.2% westbound during first three weeks of April . . . For first time in history, Los Angeles district in March passed San Francisco to become the leader in gross ticket sales on **United Air Lines** . . . **Pan American Airways** on June 1 will start New York-Marseilles service . . . **Canadian Pacific Air Lines** on July 13 will start service from Vancouver to Australia and New Zealand. Regular flights will be on alternate Wednesdays. Capital Airlines on April 24 opened service to Clarksburg, W. Va. . . . For 1949 first quarter, **Challenger Airlines** reports: 1,593,980 passenger-miles, up 106% over same 1948 period; 5,863 passengers, up 80%; 201,159 cargo ton-miles, up 117% . . . **TWA's** Washington reservations and communications office has been consolidated with the local traffic office at 1026 17th St., N. W.

Pack-Plane Type Viewed As Meeting Air Cargo Needs

By Keith Saunders

The Fairchild C-120 Pack-Plane, prototype of which is to be started within a few weeks, already is being looked upon in some quarters as the type of aircraft most needed for full development of the nation's air cargo potential, despite the assertion of Fairchild officials that production of a commercial version of the "flying tractor" is not even a remote probability.

It's not that the C-120, which Fairchild is building for the Air Force, could not be easily adapted to meet commercial air carrier needs, for George Lescher, executive engineer for Fairchild, says the required modifications would be relatively simple. It's just that if the prototype comes up to expectations, the Air Force probably will order enough of the Pack-Planes to tie up all of Fairchild's available productive capacity for several years to come.

This has not deterred numerous individuals from speculating about the potentialities of detachable fuselage aircraft in commercial air cargo operations. What makes the detachable pack or pod so interesting is the likelihood that it will double or treble the transport efficiency of aircraft and will vastly simplify ground handling of cargo in large quantities.

An Air Force official is on record, in fact, with an opinion that a saving of approximately 50% in the cost of the Berlin airlift might have been effected if detachable fuselage aircraft with extra pods had been used instead of C-54's and C-82's.

Trailer-Truck Principle. The C-120 is based on the trailer-truck principle, with the plane itself intended to serve as the prime mover or air tractor capable of flying with or without its pack or fuselage. The detachable pack is to the aircraft proper what the highway trailer is to the truck tractor and what the split cargo load compartment is in rail freight operations.

An airplane is a potential money-maker when flying with a revenue payload, but is a dead expense when sitting on the ground. And one of the big factors tending to limit the daily utilization of present cargo-type aircraft is the time required for loading and unloading. It takes about 90 minutes to put a full load of cargo aboard a DC-4 freighter, somewhat less to take it off. The time of a plane of the C-120 type would not be tied up in loading and unloading operations.

A few minutes before scheduled take-off time, a pre-loaded pack, mounted on four wheels and towed by a jeep or some similar vehicle, will be moved into place between the twin booms of the plane and below the wings and the flight compartment. Four cables are quickly attached, a hydraulically-operated mechanism pulls the pack up snug against the bottom of the aircraft, a locking device is set, the wheels beneath the pod are retracted, and the plane is ready to take off. All of this will take only a few minutes.

Design Specifications of Fairchild C-120

Gross weight (loaded)	64,000 lbs.
Gross weight (empty)	40,465 lbs.
Useful load	23,535 lbs.
Cargo capacity	2,400 cu. ft.

On reaching destination, the cargo pod is easily detached and pulled out of the way, and another pod, previously loaded, is rolled into position and attached to the plane. With ground time and turn-around time thus reduced to a minimum, maximum use of the aircraft is made possible.

Pre-Loading Advantage. Getting more work out of each basic aircraft is by no means the only advantage of the detachable fuselage; indeed, it may not even be the most important advantage. Only experience will determine this.

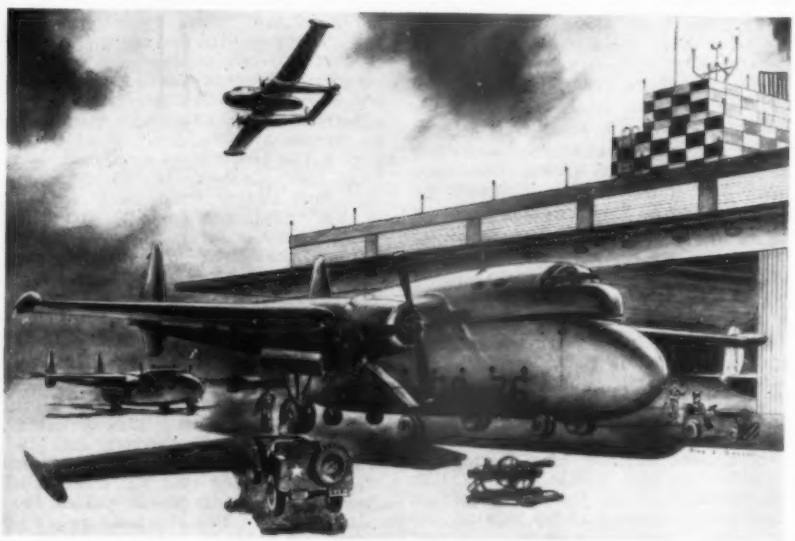
The pre-loading factor is of considerable importance in the light of the inadequacy or total lack of cargo storage and handling space at so many airports. Instead of having to keep cargo piled in a storage shed, on a loading dock or out in the open on a parking apron while waiting for plane loading time, pods can be loaded as soon as the cargo reaches the airport and then parked to await readiness of the plane.

Conversely, when a plane of the C-120 type arrives at an airport, the pod can be detached and wheeled out of the way, to be unloaded when desired directly into delivery trucks instead of having to be taken out of the plane on arrival and then held for several hours or a good part of the night to await arrival of the consignee's or cartage contractor's trucks.

A bulk shipper might even load pods at his factory or place of business and tow them out to the airport. This would tie up pods for perhaps several hours more than would be the case otherwise, but it would certainly relieve congestion at the airport and would benefit the shipper to the extent that the goods would have to be loaded only once, instead of being loaded first into a truck and then unloaded from the truck and into the pod.

However, the airlines either would have to train the shippers' own personnel in weights or balances procedures or would have to assign someone to supervise the on-site loading.

Reduced Handling Costs. There are many interesting possibilities in the use of cargo pods which can only be explored and evaluated after the C-120 prototype is flying, but the thing that will most interest the airlines is the



Fairchild Pack-Plane—This artist's sketch of the Fairchild C-120 Pack-Plane, prototype of which is to be started soon, shows the cantilevering arrangement used in designing the quadri-cycle landing gear. Separation of the pod or detachable fuselage from the aircraft proper is indicated beneath the pilot's compartment. The plane will be built for the Air Force but has interesting possibilities for commercial cargo operations.

extent to which pods can reduce ground handling costs, which now run about 50 to 60c per 100-weight.

One authority has expressed the opinion that freight handling costs can be reduced to one-tenth of the present magnitude with the proper type of equipment, loading docks, management and supervision. A detachable fuselage aircraft such as the C-120 might well be the "proper type" of equipment needed for such a reduction. At any rate, the final report of the Prototype Group to the Civil Transport Aircraft Evaluation and Development Board, released not many weeks ago, recommends study of the use of pods as one possible means of reducing freight handling costs.

Meanwhile, engineering of the C-120 is said to be about completed, and it is thought construction of the prototype can be started by early summer. Some parts of the plane already are available, since it will incorporate several elements, such as the outer wing panels, the tail assembly, the engines, the booms and the powerplant nacelles of the C-119 which Fairchild is now building at its Hagerstown plant. The Pack-Plane prototype is expected to be completed next year.

Fairchild's engineering department encountered many headaches in designing the plane, chief of which was the landing gear. The twin boom configuration made a tail wheel impossible, and to put a nose wheel on the detachable fuselage was out of the question, so there was nothing left to do but design a quadri-cycle landing gear. This was finally worked out by putting the usual type of wheels beneath the wing and a second set forward of them and connected by means of a cantilevering arrangement, with both sets folding into a single bay.

As stated before, Fairchild at present has no thought of building a detachable fuselage aircraft for commercial cargo use. If its directors were so inclined, they might license some other manufacturer to produce such aircraft under its patents, but there is no assurance they would do so.

This, however, is not likely to diminish interest in the detachable fuselage aircraft, for it is becoming increasingly evident that some such aircraft is needed to bring cargo handling and cargo flying costs down to where rates can be reduced to a point likely to attract the maximum potential volume of cargo.

And it may well be, as Maj. Raymond R. Hajeck, chief of the Aircraft, Materiel & Equipment Branch, Plans and Operations, Military Air Transport Service, told the annual meeting of the Institute of the Aeronautical Sciences, that the detachable cargo compartment transport is "the ultimate answer in cargo transportation which will eventually satisfy all the requirements of ease of maintenance, ease of loading, low cost of operation and safety."

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U. S. Domestic Airline Traffic for February

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES REV. TRAFFIC	AVAILABLE TON-MILES FLOWN	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
				%									
American	194,876	94,766,000	158,396,000	59.75	719,458	369,522	1,803,727	12,234,223	21,539,106	56.80	3,893,559	3,933,262	96.85
Braniff	38,956	13,043,000	27,025,000	48.26	84,855	56,415	65,322	1,454,635	3,289,214	44.22	853,598	879,305	95.54
Capital	63,329	17,841,000	45,757,000	38.99	79,804	124,845	395,844	2,303,696	5,926,799	38.87	1,400,474	1,451,610	94.64
Caribbean	7,897	570,000	1,275,000	44.71	597	. . . .	3,727	50,120	117,430	42.68	51,392	51,276	98.84
C & S	19,780	6,841,000	14,137,000	48.39	43,732	37,454	32,603	770,041	1,643,254	46.86	539,852	576,103	93.56
Colonial	10,829	2,916,000	5,267,000	55.36	7,109	3,815	4,154	309,131	677,271	45.64	250,864	260,468	94.04
Continental	11,122	4,007,000	11,210,000	35.74	13,955	6,783	23,298	428,380	1,159,854	36.93	432,365	433,256	98.63
Delta	38,116	17,689,000	29,403,000	60.16	78,726	46,599	104,875	1,939,623	3,929,610	49.36	989,363	1,001,464	97.79
Eastern	163,335	86,495,000	143,095,000	60.45	426,515	285,269	517,606	10,489,672	21,697,121	48.35	4,257,472	4,231,157	96.63
Hawaiian	22,593	3,110,000	4,471,000	69.56	3,860	9,992	33,982	311,728	498,705	62.51	200,010	172,256	97.64
Inland	5,753	1,928,000	3,363,000	57.33	9,731	6,044	7,022	207,124	359,860	57.56	169,967	178,864	94.92
MCA	22,749	6,721,000	12,511,000	53.72	23,659	14,205	19,008	700,963	1,341,353	52.26	596,397	604,744	97.45
National	25,784	16,386,000	29,768,000	55.05	55,417	53,769	103,069	1,889,031	4,246,143	44.49	721,838	721,300	97.06
Northeast	17,675	3,320,000	7,579,000	43.81	7,339	6,506	9,617	324,079	757,395	42.79	246,096	278,644	87.62
Northwest	36,360	16,993,000	41,461,000	40.99	171,441	125,077	257,269	2,228,041	5,149,401	43.27	1,164,277	1,221,404	94.53
TWA	80,982	53,965,000	114,589,000	47.09	685,912	373,673	670,135	6,924,760	14,568,634	47.53	3,773,319	3,844,201	93.89
United	123,394	71,799,000	124,972,000	57.45	765,644	493,208	1,473,726	9,636,411	18,782,494	51.31	3,520,231	3,615,958	95.86
Western	19,145	6,824,000	14,592,000	46.77	33,378	- 18,521	37,460	742,439	1,608,846	46.15	445,661	499,164	96.55
TOTALS	902,675	425,214,000	789,071,000	53.88	3,211,132	2,031,697	5,662,444	52,944,097	107,292,490	49.34	23,506,735	23,914,436	95.75

U. S. Domestic Airline Revenues & Expenses for February

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	$ 6,321,890	$ 5,277,418	$ 498,323	$ 128,108	$ 338,807	$ 72,475	$ 11,270	$ 6,623,501	$ 3,013,152	$ 3,610,349	$ -301,611
Braniff	962,604	747,832	176,550	18,617	13,211	6,529	445	1,108,551	514,285	594,266	-145,946
Capital	1,429,079	999,610	236,743	41,251	82,588	5,716	23,681	1,789,916	809,312	980,604	-360,838
Caribbean	69,167	49,810	13,221	. . . .	3,376	418	868	65,659	27,595	38,064	3,508
C & S	570,222	403,744	136,579	14,562	8,555	4,938	. . . .	619,659	251,645	368,014	-49,437
Colonial	272,346	181,775	85,332	1,640	1,983	1,739	. . . .	298,912	124,969	173,943	-26,567
Continental	345,462	216,129	107,340	2,580	5,554	2,142	4,565	447,779	196,917	250,862	-102,317
Delta	1,287,803	1,102,907	125,187	16,372	22,294	18,605	372	1,195,907	536,029	659,878	91,897
Eastern	6,169,068	5,536,564	280,088	101,020	117,635	107,166	11,904	5,354,385	2,746,927	2,607,458	814,683
Hawaiian	272,076	235,531	2,316	9,840	18,035	5,702	160	259,695	101,514	158,181	12,381
Inland	178,043	119,542	52,976	2,240	2,076	824	. . . .	167,086	61,473	105,613	10,957
MCA	535,797	390,738	127,160	5,403	4,993	3,465	3,584	548,515	223,626	324,889	-12,718
National	1,251,737	1,085,161	110,351	12,031	20,906	20,668	. . . .	956,972	527,307	429,665	294,764
Northeast	326,596	209,270	109,849	2,963	3,360	401	. . . .	395,013	186,421	208,592	-68,417
Northwest	1,364,887	985,104	256,837	45,028	62,612	10,653	700	1,821,021	799,139	1,021,882	-456,134
TWA	3,883,079	3,060,576	483,363	125,497	144,512	42,420	3,696	4,978,247	2,301,707	2,676,540	-1,095,168
United	5,077,449	4,007,516	522,086	170,913	272,754	52,447	12,168	6,600,238	3,008,285	3,591,953	-1,522,789
Western	562,077	396,075	141,842	5,979	10,037	2,987	1,894	677,460	315,890	361,570	-115,383
TOTALS	30,879,382	25,005,302	3,466,143	704,144	1,133,288	359,295	75,307	33,908,516	15,746,193	18,162,323	-3,029,135

NOTE: These figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

U. S. Feeder Airline Revenues & Expenses for February

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
All American	$ 74,171	$	$ 73,308	$ 675	$	$ . . .	$	$ 74,577	$ 36,822	$ 37,755	$ -405
Challenger	119,754	38,973	75,513	2,239	2,644	266	. . . .	115,566	56,272	59,294	4,188
Empire	63,789	19,057	43,980	302	. . . .	103	. . . .	69,443	37,726	31,717	-5,654
Florida	55,805	7,006	48,589	137	. . . .	45	. . . .	48,123	24,756	23,367	7,682
Monarch	97,643	21,422	74,812	367	907	141	. . . .	129,046	67,763	61,283	-31,403
Piedmont	150,251	49,227	99,369	550	672	432	. . . .	188,025	118,721	69,304	-37,774
Pioneer	244,380	90,921	139,009	642	922	637	6,863	243,836	127,123	116,713	544
Robinson	59,287	28,111	30,951	. . . .	295	44	140	80,240	38,571	41,669	-20,953
Southwest	159,074	58,952	96,740	710	1,810	197	495	180,122	94,051	86,071	-21,049
Trans-Texas	121,507	27,161	93,359	434	338	70	. . . .	161,498	91,894	69,604	-39,990
West Coast	55,140	23,022	31,711	257	. . . .	40	175	98,156	43,545	54,611	-43,016
Wis. Central	79,912	9,259	68,700	950	. . . .	49	. . . .	78,776	36,969	41,807	1,136
TOTALS	1,280,713	373,111	876,041	7,263	7,588	2,024	7,673	1,467,408	774,213	693,195	-186,694
					Helicopter	Mail Service					
Los Angeles	30,211	. . . .	30,211	. . . .	. . . .	. . . .	. . . .	11,984	96	11,888	18,228

NOTE: Figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

U. S. Feeder Airline Traffic for February

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor %	Mail Ton-Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane Miles	Scheduled Miles	% Scheduled Miles Completed
All American	....	....	....	...	3,242	1,819	....	5,061	25,202	20.08	134,018	147,744	90.71
Challenger	2,523	702,000	2,738,000	27.88	4,117	7,543	8,809	91,045	269,287	33.81	125,835	136,906	91.79
Empire	2,171	637,000	1,420,000	30.82	1,312	919	....	44,001	108,463	40.57	67,663	79,296	85.34
Florida	941	130,000	500,000	26.00	605	239	....	13,255	54,060	24.52	61,783	62,576	98.73
Monarch	1,471	389,000	2,244,000	17.35	1,677	918	4,508	46,200	179,486	25.74	124,686	140,980	88.44
Piedmont	3,807	809,000	4,173,000	19.37	2,490	1,775	1,803	83,563	386,943	21.60	198,738	203,672	97.58
Pioneer	6,289	1,869,000	7,174,000	26.05	6,921	1,623	3,725	176,624	750,635	23.53	295,061	305,648	94.44
Robinson	2,686	401,000	1,271,000	31.55	1,013	....	892	36,011	130,974	27.49	60,524	67,428	87.45
Southwest	6,496	1,196,000	3,762,000	31.79	3,742	2,030	5,354	131,110	394,824	33.21	178,839	187,152	95.16
Trans-Texas	2,060	524,000	3,652,000	14.33	5,099	1,166	636	55,735	287,776	19.37	173,908	175,504	99.09
West Coast	2,989	380,000	1,745,000	21.80	613	509	....	35,243	154,753	22.78	83,081	91,476	90.62
Wis. Cent.	1,080	159,000	721,000	22.07	1,354	1,034	....	15,721	36,432	43.15	93,695	121,912	76.85
TOTALS	32,473	6,996,000	29,400,000	23.79	32,185	19,575	25,727	733,569	2,778,835	26.39	1,597,831	1,720,294	92.36
Helicopter Mail Service													
Los Angeles	....	....	....	...	3,019	....	....	3,019	9,250	32.64	24,215	25,144	96.31

U. S. Feeder Airline Revenues & Expenses for January

Airlines	Total Operating Revenues	Passenger Revenues	Mail Revenues	Express Revenues	Freight Revenues	Excess Baggage Revenues	Non-Scheduled Transport Rev.	Total Operating Expenses	Aircraft Operating Expenses	Ground & Indirect Expenses	Net Operating Income
All American	$ 72,338	$	$ 72,043	$ 706	$	$	$	$ 82,597	$ 44,143	$ 38,454	$ -10,260
Challenger	85,488	20,072	63,136	1,112	762	179	272	109,381	49,965	59,416	-23,893
Empire	72,934	18,381	53,788	348	....	101	....	72,685	38,448	34,237	249
Florida	61,289	7,634	53,324	108	....	42	....	52,157	27,657	24,500	9,131
Monarch	95,723	20,418	73,696	389	664	105	90	121,590	64,230	57,360	-25,868
Piedmont	143,610	49,635	91,105	600	424	423	1,385	164,184	97,186	66,998	-20,574
Pioneer	205,425	73,187	122,208	840	894	574	3,167	248,270	126,567	121,703	-42,845
Robinson	53,491	23,290	29,566	....	661	90	....	84,581	39,036	45,545	-31,089
Southwest	177,459	63,956	109,267	1,089	2,363	256	200	189,245	94,764	94,481	-11,786
Trans-Texas	Figures not yet available. Data will be reported at a later date.										
West Coast	62,441	27,133	34,987	302	....	47	....	100,990	47,096	53,894	-38,549
Wis. Central	58,939	5,205	53,122	413	....	....	55	81,005	37,956	43,049	-22,066
TOTALS	1,089,137	308,911	756,242	5,907	5,768	1,817	5,169	1,306,685	667,048	639,637	-217,550
Helicopter Mail Service											
Los Angeles	35,480	....	35,480	....	....	....	....	31,169	20,969	10,200	4,311
Figures for Robinson Airlines not Previously Reported											
October	55,791	28,110	25,793	....	526	58	....	68,948	30,374	37,574	-13,157
November	63,007	29,482	32,176	....	823	24	....	84,345	38,755	45,590	-21,338

NOTE: Figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

U. S. International Airline Revenues & Expenses for January

Airlines	Total Operating Revenues	Passenger Revenues	U. S. Mail Revenues	Foreign Mail Revenues	Express Revenues	Freight Revenues	Excess Baggage Revenues	Non-Scheduled Transport Rev.	Total Operating Expenses	Aircraft Operating Expenses	Ground & Indirect Expenses	Net Operating Income
American	$ 346,916	$ 302,133	$ 6,487	$ 3,582	$	$ 19,867	$ 4,890	$	$ 325,543	$ 167,886	$ 157,657	$ 21,373
Amer. O'Seas	1,358,441	782,875	315,395	141,528	70,909	....	10,911	33,470	1,612,100	788,291	823,809	-253,660
Braniff	164,289	77,541	80,660	976	....	2,716	1,441	....	204,328	109,325	95,003	-40,039
C & S	286,594	153,931	118,269	389	....	10,076	3,835	....	235,733	113,485	122,248	50,861
Colonial	91,000	54,747	32,729	....	....	3,104	420	....	132,071	61,548	70,523	-41,071
Eastern	78,616	63,782	3,585	....	....	10,097	1,153	....	74,335	38,979	35,356	4,282
National	99,607	73,869	5,543	....	6,853	....	1,507	1,836	91,004	36,059	54,945	8,603
Northwest	1,040,089	398,279	473,437	35,000	3,406	120,647	8,857	....	1,018,025	461,665	556,360	22,063
Panagra	1,126,088	872,405	93,132	59,585	85,266	....	19,836	6,825	1,332,012	630,161	701,851	-205,923
Pan American												
Latin Amer.	5,648,910	3,099,204	1,747,329(1)	158,974	488,619	....	98,019	13,785	5,293,347	2,378,073	2,915,274	355,562
Atlantic	3,741,444	1,374,105	1,883,690(2)	123,519	261,690	....	33,693	58,275	3,441,025	1,614,057	1,826,968	300,418
Pacific	2,847,321	1,350,692	1,199,365(3)	71,480	181,977	....	22,933	....	2,714,952	1,459,003	1,255,949	132,369
Alaska	422,130	150,303	220,032(4)	...	50,405	....	804	....	394,003	187,591	206,412	28,126
TWA	2,842,391	1,418,327	787,080	259,707	250,324	....	49,909	68,521	2,987,018	1,522,613	1,464,405	-144,627
United	353,511	266,073	50,530	....	8,005	....	5,060	7,150	290,480	163,606	126,874	63,031
TOTALS	20,447,347	10,438,266	7,017,263	854,740	1,407,453	166,507	263,268	189,862	20,145,976	9,732,342	10,413,634	301,370

1) Represents company's estimate of amount which should be received in accordance with terms of the Civil Aeronautics Act when permanent rates are established. Estimate exceeds permanent rates under review by $1,597,495.
2) Estimate exceeds temporary rates in effect by $1,341,941.
3) Estimate exceeds temporary rates in effect by $102,476.
4) Estimate exceeds temporary rates in effect by $12,589.

NOTE: Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for Braniff to South America; C & S to Havana; Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

Airlines Report Officers' Salaries for 1948

Salaries and other compensation of officers and directors for calendar year 1948 have been filed with CAB by Eastern Air Lines, Pioneer, Capital, Empire and American Airlines. Increases or decreases from 1947 are shown in parentheses:

Eastern Air Lines: E. V. Rickenbacker, pres. and dir., $35,000 salary and $5,362 in director's fees and retirement plan contributions (up $3,333.75); Paul H. Brattain, 1st v. p. and dir., $26,250 (up $3,750) and $3,640 (up $2,111.03); S. L. Shannon, 2d v. p. and dir., $23,750 (up $3,750) and $2,792 (up $1,478.23); T. F. Armstrong, secy.-treas. and dir., $16,875 (up $1,875) and $2,191 (up $997.50); J. W. Moore, asst. treas. and dir., $11,400 (up $1,800) and $1,530 (up $493.29); L. P. Arnold, v. p., $16,875 (up $1,875) and $1,796 (up $1,388.37); M. M. Frost, v. p., $21,875 (up $1,875) and $999 (up $999); S. DeJ. Osborne, v. p., $21,875 (up $1,875) and $1,606 (up $1,232.54); E. R. Cook, dir., $400 director's fees; J. M. Cox, Jr., dir., $300; P. M. Davis, dir., $300 (up $300); G. B. Howell, dir., $700 (up $300); Hugh Knowlton, dir., $800 (up $200); G. H. McCarthy, dir., $500; W. L. Moore, dir., $700 (up $100); S. Peabody, Jr., dir., $300; Paul E. Reinhold, dir., $700; L. S. Rockefeller, dir., $900 (up $200).

Capital Airlines: J. H. Carmichael, pres. and dir., $27,500 (up $3,000); R. G. Lochiel, v. p., treas. and dir., $20,365 (up $205); R. J. Wilson, v. p. and dir., $16,560 (down $720); J. W. Austin, Jr., v. p., $16,875; J. B. Franklin, v. p., $15,750; R. P. Wright, asst. treas., $9,700 (up $1,200); Hayes Dever, secy., $12,875 (up $688).

Empire Air Lines: Joe Lux, pres., no salary listed; Joe Rosenkranz, v. p., no salary listed; Arvid R. Nelson, secy.-treas., $3,600 (down $1,300).

American Airlines: C. R. Smith, chm. of bd., $60,000; R. S. Damon, pres. and dir. (resigned Jan., 1949), $40,000; O. M. Mosier, v. p. and dir., $25,000; William Littlewood, v. p., $25,000; Amos Culbert, v. p., $20,000; L. G. Fritz, v. p., $24,167 (up $1,667); Rex Smith, v. p., $19,167 (up $1,667); R. E. S. Deichler, v. p., $23.333 (up $3,333); W. J. Hogan, v. p. and treas., $23,333 (up $11,056); C. W. Jacob, v. p. and secy., $19,333 (up $2,833); W. H. Miller, asst. v. p., $17,667 (up $1,440); Carlene Roberts, asst. v. p., $12,000 (up $2,000); George C. Van Nostrand, asst. v. p., $12,000 (up $2,700); J. G. Zevely, asst. v. p., $11,988; Walter Sternberg, asst. v. p., $13,177; C. R. Speers, asst. v. p., $12,839 (up $2,839).

M. D. Miller, reg. v. p., $11,500 (up $1,500); W. N. Bump, reg. v. p., $10,750 (up $750); A. R. Bone, reg. v. p., $10,500 (up $500); W. H. Johnson, reg. v. p., $7,694; Stanley G. King, reg. v. p. (appointed Oct. 20, 1948), $2,177; P. G. Larie, comptroller and asst. treas., $15,467 (up $1,867); V. J. Long, asst. treas. and asst. secy., $13,500 (up $1,000); C. H. Kibbee, asst. treas., $13,200; T. O. English, asst. treas., $6,750 (up $3,900); W. L. McMillen, asst. treas. and asst. secy., $11,333 (up $1,333); A. A. Paradis, asst. secy., $6,667 (up $1,117); Harold Ames, dir., $900.

H. E. Benedict, dir., $1,000; E. H. Butler, dir., $700; Amon G. Carter, dir., $400; Charles S. Cheston, dir., $1,600; T. M. Conroy, dir., $1,000; Silliman Evans, dir., $600; John W. Farley, dir., $800; T. S. Hammond, dir., $200; A. N. Kemp, dir., $1,200; Walter S. McLucas, dir., $200; Edgar M. Queeney, dir., $500; Robert W. Miller, dir., $400, and Charles T. Fisher, dir., $1,300.

Pioneer Air Lines: Robert J. Smith, pres. and dir., $12,000; H. B. Selfert, v. p. and dir., $9,000 (up $700); H. L. Lawrence, v. p., $6,000; Eugene W. Bailey, secy.-treas., $7,200 (up $700).

FOR SALE

DC-3 21-PASSENGER AIRPLANES

$8,500.00

and up

(plus 2% Sales Tax)

- Equipped with Wright GR-1820-G-102 Engines.
- Recently removed from scheduled passenger service.
- Airframe and engines approaching overhaul.

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Address all inquiries to:

AMERICAN AIRLINES, INC.

Att: Director of Surplus Sales

43-02 Ditmars Boulevard, Astoria, Long Island, N. Y.

(Telephone RAvenswood 8-1000)

ENGINEERS—

Expanding Engineering Department of North American Aviation, Inc., needs qualified

Aerodynamicists

Thermodynamicists

Stress Analysts

Aircraft Designers

Flutter Engineer

and specialists in all phases of aircraft engineering, for work on military projects. Please include summary of experience in reply.

●

Engineering Personnel Office

North American Aviation, Inc.

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Los Angeles 45, Calif.

FOR SALE!

DC-4 (C-54-B-DC) 50-PASSENGER AIRPLANES

$175,000.00 each

plus 2% sales tax

- Equipped with P. & W. R-2000-13 (2SD13G) Engines.
- Recently removed from scheduled passenger service.
- Standard airline interior.

"AS IS" MUNICIPAL AIRPORT, TULSA, OKLAHOMA

Address all inquiries to:

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(Telephone RAvenswood 8-1000)

MUNICIPAL AIRPORT FOR RENT

The County of Orange, New York, has taken over Montgomery Auxiliary Field No. 1 (Orange County Airport), located one mile SW of Montgomery, N. Y.,' having three runways one hundred feet wide, concrete with twenty-five foot asphalt shoulders, NE-SW 3500', N-S 3500', NW-SE 3000'.

Proposals for operating contract and/or rental of facilities subject to provisions of WAA grant and CAA approval are sought by the undersigned.

BOARD OF SUPERVISORS OF ORANGE COUNTY, N. Y.
LESTER J. ROOSA, Clerk
Goshen, New York

1947 Airline Statistics: CAB's compilation of "Annual Airline Statistics" for U. S. certificated air carriers covering the calendar year 1947 has been completed and copies may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at $1.00 each. Tabulations of financial and statistical data summarize the commercial operations of domestic trunklines, feederline, territorial, overseas, and international U. S. flag carriers for 1947. Tables show volume and type of airline expenses and revenues, mileages flown, amounts and types of traffic carried, utilization of aircraft and other pertinent data. Study was prepared by the Accounting and Rates Division, Bureau of Economic Regulation, CAB.

new and used
DC-3 and DC-4
parts, equipment and accessories
at below cost!

For DC-3, DC-4, and P. & W. R-1830 and P. & W. R-2000 parts, accessories and components, contact:

Surplus Sales Representative, Stores Dept., United Air Lines Maintenance Base, Bayshore Highway, South San Francisco, Calif. Telephone JUno 8-2424.

Items are available for your inspection at the above address. Prompt delivery. Guaranteed to be as represented.

UNITED AIR LINES

Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications $1.00 a line, minimum charge $4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Avenue, NW., Washington 5, D. C.

FOR SALE

FOR SALE

FOUR LOCKHEED LODESTARS

Property of British West Indian Airways Ltd.
Registered in Trinidad

Total Airframe Hours from 5000 to 6500

All equipped with Hamilton Standard Propellers Model 23E50 Electrical System—24V

Recently removed from Scheduled Passenger Service

ALSO

Spares valued at approximately $100,000.00

We wish to dispose of all Aircraft Spares

WHAT OFFERS!!!

CONTACT: British Overseas Airways Corp.
630 Fifth Ave., New York 20, N. Y.
Tel. CO-5 3737—Ext. 50

HELP WANTED

WANTED: Airport Manager for medium size Airport serving four airlines. Prefer man not over 50 years of age. Requires good personality and should have intimate knowledge of established airlines and air services. Address communication Box No. 658, American Aviation, 1025 Vermont Avenue, N. W., Washington 5, D. C.

NEED A PILOT?
NEED A JOB?

Are you qualified to fly the Atlantic, to instruct, to fly charter, to dust, or to help organize a new airline? We can help you find the job you need, or the man you need. No registration fee. PILOTS EMPLOYMENT AGENCY, Box 152, Whippany, N. J.

WANTED TO BUY

AIRCRAFT MATERIAL WANTED

All AN Hardware, electrical items & components such as nuts, bolts, bearings, fittings, valves, circuit breakers, switches, lights, relays, pulleys, spark plugs, gas caps, etc. FOR SALE —Largest stock of aircraft parts and components on West Coast. 100% inspection, courtesy discounts to brokers. Immediate delivery.

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WINGS OF YESTERDAY

25 Years Ago

The Stout Air Pullman, America's first all-metal commercial plane, built in Detroit, successfully completed its test at Selfridge Field under guidance of Walter E. Lees, test pilot of the Johnson Airplane & Supply Co., of Dayton, O. The Air Pullman was a seven-passenger-and-pilot cabin transport designed for airline work.

•

The Pioneer Turn Indicator, used on planes of the Army, Navy and Air Mail, was developed to a reliable and efficient state through the combined efforts of the Sperry Gyroscope Co., The Lawrence Sperry Aircraft Co., and the Pioneer Instrument Co.

10 Years Ago

(In AMERICAN AVIATION)

Hughes Tool Co., of Houston, headed by multi-millionaire Howard Hughes, was revealed as the holder of 99,293 shares of $5 par common stock in Transcontinental & Western Air, Inc. This was more than a 10% interest.

•

Consolidated Aircraft Corp. at San Diego began test flights of a 52-passenger twin-engine flying boat, Model 31, designed to be suitable for either commercial or military use.

•

The Civil Aeronautics Authority held a hearing on United Air Lines' application for payment of mail compensation on a pound-mile instead of an airplane-mile basis. This was the first proceeding involving a pound-mile application.

•

Richard S. Boutelle had been promoted from assistant director of CAA's Bureau of Safety Regulation to director.

LETTERS

Airlines & Distributors

To the Editor:

I have read with a great deal of interest the article entitled "The Case For and Against Buying Through Distributors" on page 20 of your April 1, 1949, issue.

We here at Southwest Airmotive appreciate the kind references to our company, and are further gratified that this increasingly important topic has been discussed in a publication as widely read as is AMERICAN AVIATION. I do feel that the writer omitted reference to many of the valuable services which distributors are in a position to provide for the airlines.

Of course, we distributors cringe at being referred to as "middlemen," a sobriquet as distasteful to us as it is to the airlines. We are the first to realize that the middleman is an expensive and doubtful luxury which none can afford. Thus, all thinking distributors are doing their best to eliminate the mere relaying of airline purchase orders from airline-to-distributor-to-manufacturer. Our objective is to have the right stock *in hand* on our own shelves, so that we can fill orders promptly and directly.

We are making a concerted effort to keep the manufacturers from *forcing* airlines to deal with us. Savings in money, time, and work are possible through an airline-distributor relationship, and such benefits speak eloquently for themselves. Through harmonious dealings like those presently enjoyed by Southwest Airmotive with several airlines, we believe that others will see the many obvious advantages and, eventually, will want to take advantage of them.

Another point made by your writer was that the distributors' lowering of airline inventories merely indicates to the airlines that they need better planning within their own organizations. I think the author missed the point here. Any organization could stand improvement, but this has no bearing on the fact that, by stocking the parts on our own shelves, we not only can reduce airline inventories but can have needed items quickly available in the airlines' own backyards. Those facts, obviously, constitute a dollars-and-cents savings for the airlines. Also, through this plan, it is our money, not the airlines, which is invested; we pay the insurance, provide the warehouse space and manpower, and offer numerous other savings in such things as freight, telegrams, telephone calls and general follow-up and follow-*through* routines.

Whatever the final trend may be, you may be assured that we want the airlines to operate with maximum efficiency. We feel that what is good for any segment of the industry is good for the industry as a whole.

GEORGE W. JALONICK, III
Southwest Airmotive Co.
Dallas, Tex.

Low Tension Ignition

To the Editor:

Your issue dated Mar. 15, 1949, made mention under "Maintenance of Ignition for DC-6," that Braniff Airways was changing its ignition from high tension to low tension at a cost of approximately $100,000.00 for the complete change over.

This was an interesting note inasmuch as Northeast Airlines has just acquired the first of its Convairs and during the pilot training and short period of scheduled operation, low tension has proven a very interesting feature of our aircraft. To date we have experienced no ignition trouble of any description.

A most frequent comment or inquiry from flight personnel to the communications personnel is "Why is it that the communications equipment on the Convairs seems so much better than on the DC-3's and DC-4's." The communications equipment on the Convairs is essentially the same as that on the other two types of aircraft. It is believed that the extremely low noise level that is existent on the Convairs is due primarily to the fact that Northeast Airlines has the Pratt and Whitney engines equipped with low tension ignition.

The decision to acquire aircraft with this type ignition system was made two years ago at the time the initial order was placed for Convairs. We are extremely glad of the decision based on the results so far under training and scheduled operation.

F. C. BARKER
Director of Communication
Northeast Airlines

BOOKS

AIRCRAFT ANNUAL 1949, edited by John W. R. Taylor. Published by Ian Allan Ltd., London. 95 pp. Illustrated. $1.50.

With this issue, Ian Allan's Aircraft Annual adopts a new format and broadens the scope of its coverage so as to interest everyone who is at all interested in aviation.

In addition to 16 informative articles on such varied subjects as "Refuelling in Flight," "Stratocruiser Story," and "Backyard (Helicopter) Flying," the Annual carries specifications of the world's aircraft and a large number of exceptionally fine photographs. Some of the articles are intended to be the first in a series which will be continued in succeeding Annuals, but in general the contents will vary from year to year to keep pace with new developments.

AIRCRAFT MAINTENANCE AND REPAIR, by the technical development staff of Northrup Aeronautical Institute. Published by McGraw-Hill Book Company, Inc., 330 West 42nd St., New York 18, N. Y. 440 pages, illustrated. Price $6.

This is the third and final volume in a series of three books covering Aircraft Basic Science, Aircraft Power Plants, and Aircraft Maintenance and repair. As in the case of the two previous volumes, this book brings under one cover many valuable pieces of information which should contribute much to the education of mechanics, engineers and aircraft supervisory personnel.

The newest volume covers hydraulics, flow control valves, landing gears, heat treating and inspection of metals, gas welding equipment and technique, sheet metal layout, tools, riveting, woodworking, fabric covering including doping, assembly and rigging and weight and balance. For single source coverage of aircraft subjects, this book is one of the best on the market.

ENGINE DRIVEN AIR PUMP
AIR CHECK VALVE
AIR PRESSURE RELIEF VALVE
AIR DISTRIBUTING VALVE
COMBINATION OIL SEPARATOR AND PRESSURE REGULATING AND UNLOADING VALVE
ELECTRONIC TIMER—Affords automatic or manual remote electrical control for regulating frequency and duration of Boot De-Icer operating cycles to suit any type and rate of ice formation.

De-icing Equipment That Always Delivers

The word *dependability* takes on extra importance when applied to de-icing equipment. And because dependability is so vital, Eclipse-Pioneer Ice Elimination Systems have become the choice of plane manufacturers and flyers alike. They know Eclipse-Pioneer equipment will perform smoothly and efficiently when it is needed most. For, Eclipse-Pioneer's reputation, one of the oldest and finest in the aviation industry, has been built by the constant quality and dependability of all Eclipse-Pioneer products. When the time comes for you to order accessories for your planes, be sure to get de-icing equipment that *always* delivers—specify Eclipse-Pioneer.

Bendix
AVIATION CORPORATION

LOOK FOR THE ECLIPSE MARK OF QUALITY

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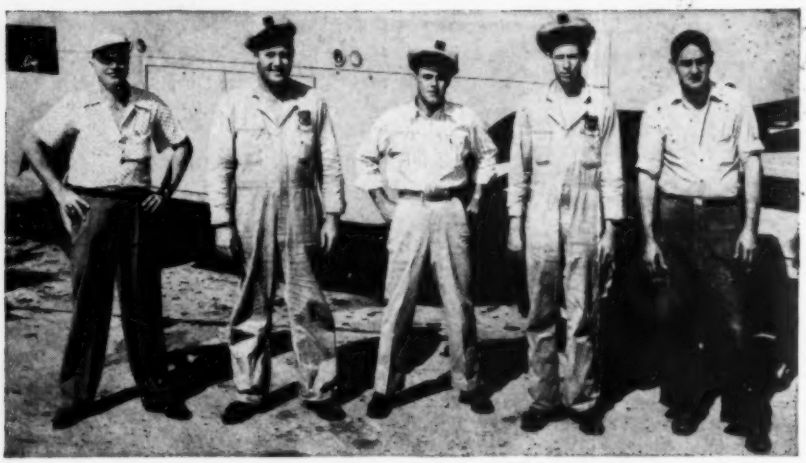
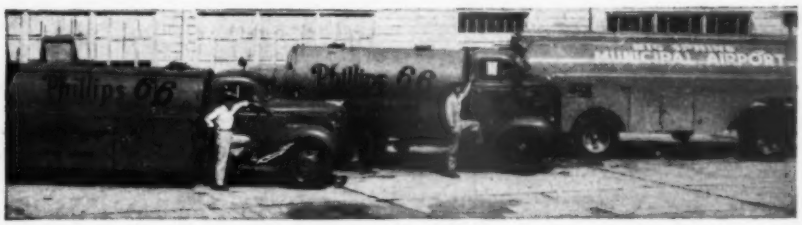
Big Spring Municipal Airport, Texas



Some of the Big Spring Airport Personnel. Airport Manager, Robert J. Cook (left) spent two years as Army Instructor and three years as captain in the ATC, flying C-54 cargo planes "over the Hump".

FOR TOP-FLIGHT AVIATION FUEL . . .

Phillips 66 Aviation Gasoline!



Phillips *66* refueling trucks at Big Spring. Phillips *66* Aviation Products are used by private planes as well as commercial airlines.

BIRDS of a feather flock together! The best recommendation for high-quality Phillips *66* Aviation Products is a list of the high-ranking airports which use them!

Big Spring Municipal Airport, where dependable Phillips *66* Aviation Products are in daily demand, is well equipped with four paved runways, each well over a mile in length. The entire field is lighted with runway contact beacon, flood and construction lights. 24-hour CAA Tower, CAA Communications service and U. S. Weather Bureau Service are all located on the field. A licensed A and E Mechanics Shop provides repair facilities.

When you are charting your next flight over this territory, plan to stop at Big Spring for refueling with dependable Phillips *66* Aviation Gasoline. You'll find ample hangar space for overnight stays, or for longer periods. The Aviation Dept., Phillips Petroleum Co., Bartlesville, Okla.

Phillips 66

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